

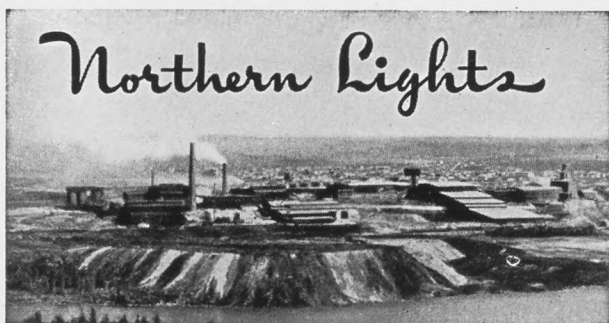


Northern Lights

CHRISTMAS 1951 - VOLUME 10, NUMBER 4







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GEORGE MAINWARING, *Editor.*

VOL. 10 DECEMBER, 1951 No. 4



Ready for Christmas?

ARE you ready for Christmas? We don't mean have you finished your Christmas shopping and checked off all the items on your list as you battled your way through the crowded stores. Nor do we mean, have you got your gifts wrapped, your cards addressed, the tree lights checked and the decorations up.

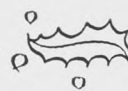
All these things, of course, are important at Christmas time. But so are other things important, much more important. Have you arranged to devote a period of your day to the worship of Him whose birthday falls on Christmas? Not forgetting that your minister would like to have you in church on other days of the year too. Have you arranged to give at least one gift for which you do not expect one in return; not just a few coins in the collection pot on Main Street, but a generous gift to a family in need or a worthwhile charity.

Have you cast out from your mind and heart all the malice, all the silly, unkind thoughts you hold, for wrongs real or fancied? And have you decided that *this* time it will not be just a day of feasting and partying and gift wrapping and revelry, but that it will be a day of kindness and forgiveness, and determination that your life and deeds may more closely match those of Him whose birthday you observe?

If you plan to do all this, then you are really ready for Christmas. And though not a single soul calls on you that day, nor calls out the old familiar greeting, you will, in spite of everything, have a Merry Christmas.

This Christmas, let us give thanks to God who guides our destiny, for the many blessings bestowed on us—free worship, free speech, free press, free ballot, free schools, and free enterprise.

As we pay homage to the birth of Christ in our churches and in our homes, around the festive board and Christmas tree, let us so value these privileges that we may ever be on the alert to defend our freedom against tyranny. Let us by our actions and deeds give succor and courage to those less fortunate people who suffer from aggression and oppression.



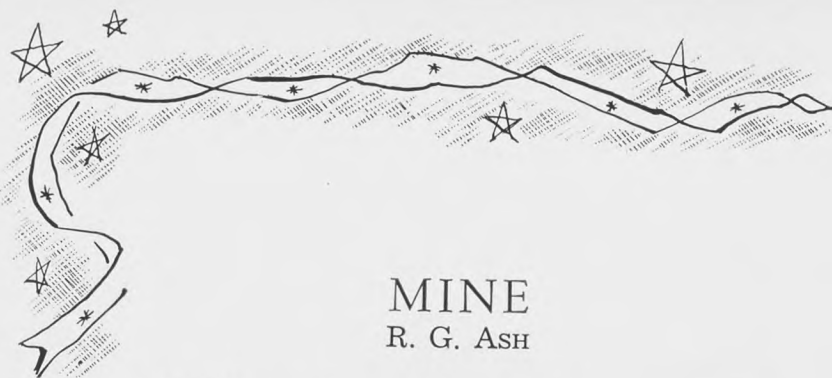
John H. Ambrose, Smelter Superintendent for the past twenty years, resigned on November 15th last to return to Eastern Canada. His loyalty and his efficient service through the years were outstanding and a distinct loss is felt with his departure. Our best wishes go with him and Mrs. Ambrose wherever they may be.



J. H. AMBROSE



Allan Nelson and W. Armstrong beside new fan on 1170 level.



MINE

R. G. ASH

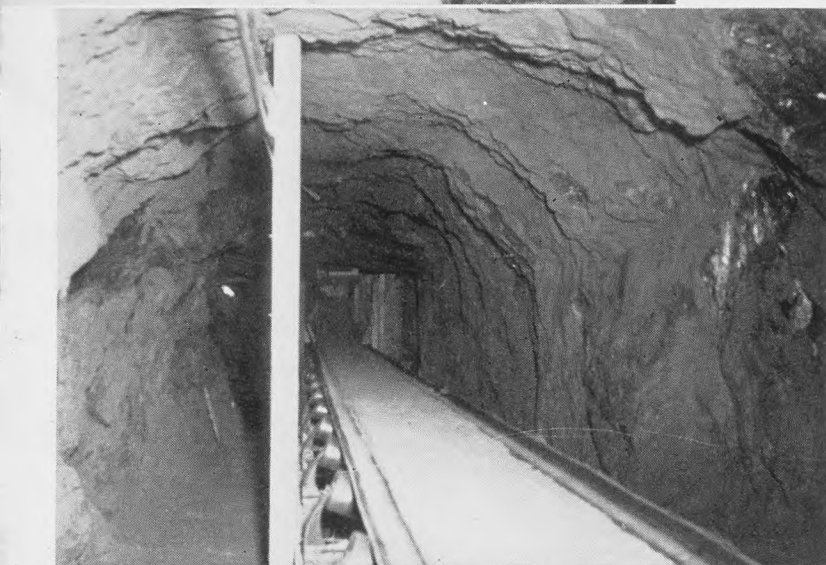
THE metals produced from the ore mined here are many—copper, zinc, gold, silver, cadmium, tellurium and selenium.



The total ore produced to date is slightly over 37 million tons of which 6¼ million tons was mined by open pit method and the balance by underground stope method. Ore production started here in 1931, although exploration and development mining had been going on for several years before, and over a million tons was mined.

There has never been a year since that we haven't beaten that figure by a large margin. 1943 was our biggest year as far as ore hoisted was concerned when we brought over 2¼ million tons to the surface. Production for the past 7 years has averaged 5,000 tons a day but present plans call for a slightly decreased tonnage, with no loss of metals produced, due to other parts of the plant producing metals from stockpiles of zinc residue and current slag production which have been accumulating for the past twenty years. In addition to the above a total of over 5 million tons of waste has been mined, two-thirds of which came from the open pit. Another big tonnage figure, as far as the mine is concerned, is backfill. Three different types of backfill have been used in the past, these being waste rock, sand and slag. Close to 6,000,000 yards, one yard of which replaces three tons of ore, have been placed.

Practically all of our underground mining up to a year ago was done by large open stope bench mining. The method here is to develop a blocked out ore ton-



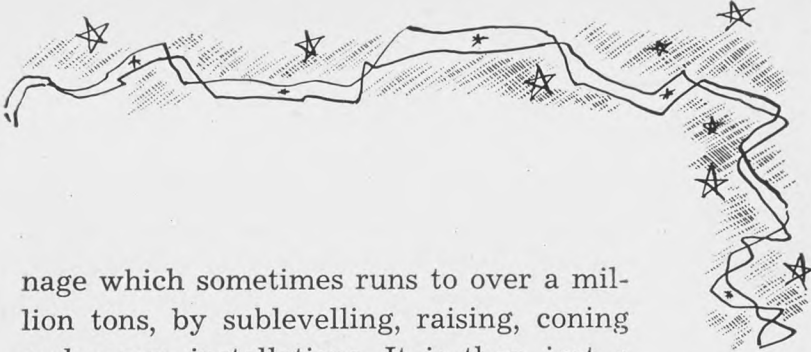
36" conveyor at 68 fill.



I. Eisler and J. Hanson on staging in fill raise.



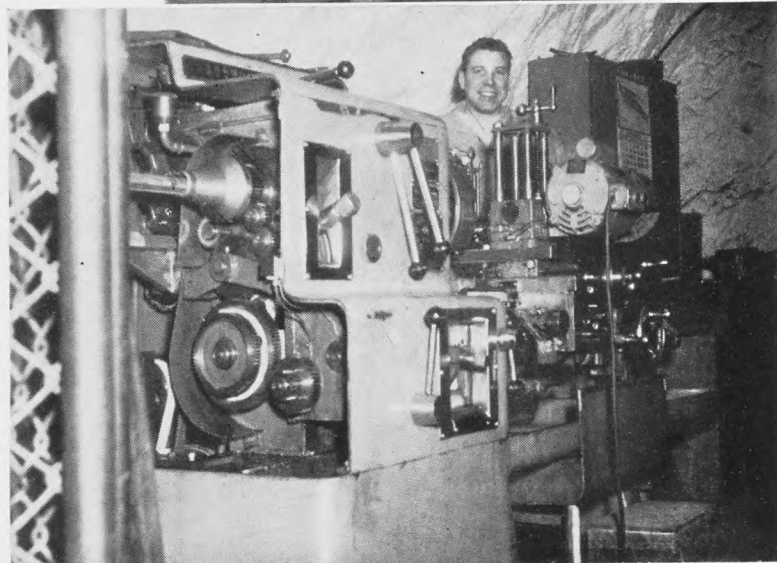
Tugger removal — Wes. McLean, John Hanson, John Williamson, and Irwin Eisler.



nage which sometimes runs to over a million tons, by sublevelling, raising, coning and scam installations. It is then just a matter of putting in the crews and drill, blast, scrape and haul the ore to the pockets. Blocks or ore commonly known as pillars are sometimes left on the ends and top and bottom of these stopes for purposes of practical ore extraction or removal. After the open stopes have been filled by backfilling, mining of the pillars is possible and this operation has now been started. The pillars on an average contain smaller tonnages than the stopes and entail more engineering, supervision, and work to get the ore out—thus it is a good idea to get at the pillar ore as soon as possible and mine it in conjunction with the easier and cheaper stope mining. Several other methods of stoping are now being used on smaller ore bodies, these being by shrinking, cut and fill.

With the Christmas and holiday season at hand the Mine Dept. with its 720 employees now distributed amongst the Flin Flon, Schist and North Star Mines, wishes you all a *Very Merry Christmas and a Happy New Year.*

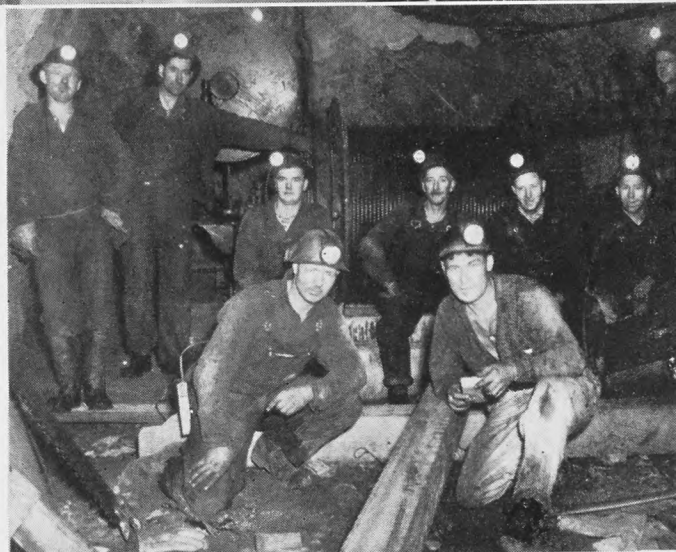
Mine Office Savings Bond sales crew.



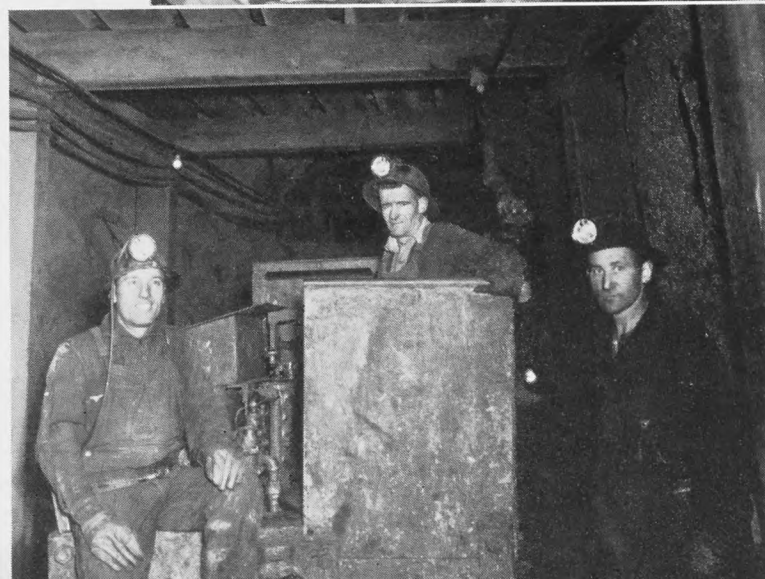
Doug Chayko, lathe operator on 2210 level.

Timbermen on new hoist installation.

Stan Demchinski, Lorne Mansell, Hans Crone, hauling ore on 2250 level.

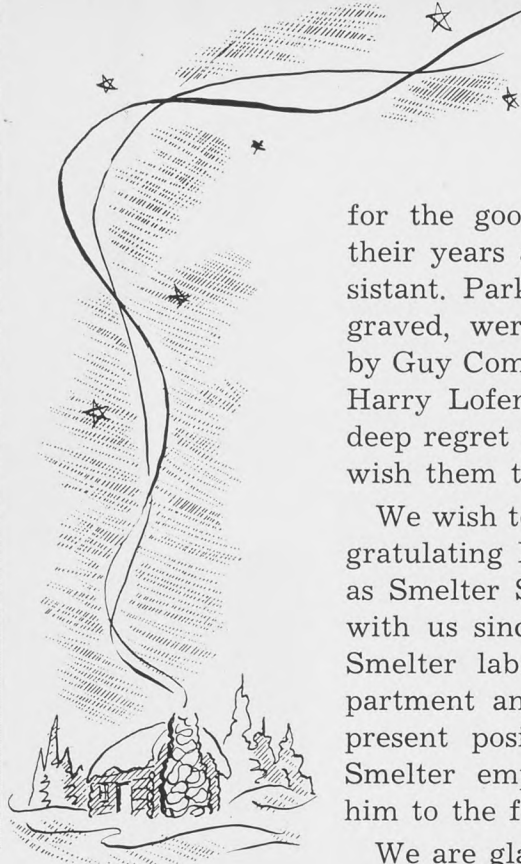


Four generations—Mrs. Tommy Hunter, top right.





Gordon F. Springings
left us in November.



SMELTER

F. E. GREEN

OUR department has been very busy this year with the new additions of the Fuming Plant and the Dryer. The Fuming Plant is running very nicely now, and Maurice Knechtel is going all out to get the Dryer working smoothly.

We have also had some changes in our personnel these last few months. On October 2nd, the Smelter Recreation Club held a mixed party to say good-bye to Jack Lavis. Jack retired on pension on September 30th and was one of our oldest employees. Jack's cheery good morning and good fellowship will be greatly missed around the Smelter. On behalf of the Smelter employees, Mr. Ambrose presented Jack with a gold watch and chain, and Ruth Monkhouse presented Mrs. Lavis with a corsage.

Then again on October 12th, the Smelter employees held a Cocktail Party to say good-bye to John H. Ambrose, Superintendent, and Gordon M. Springings, assistant superintendent. Guy Comstock spoke on behalf of the employees, paying tribute to Mr. Ambrose and Mr. Springings

for the good work accomplished during their years as our superintendent and assistant. Parker 51 desk sets, suitably engraved, were presented to Mr. Ambrose by Guy Comstock, and to Mr. Springings by Harry Lofendale. It was with feelings of deep regret that we said good-bye, but we wish them the very best for the future.

We wish to take this opportunity of congratulating Roy Mast on his appointment as Smelter Superintendent. Roy has been with us since 1932 when he started as a Smelter laborer. His interest in the department and his ability have led to his present position. We feel sure that all Smelter employees will co-operate with him to the fullest extent.

We are glad to welcome our new assistant superintendent, George Kent, who comes to us from the Zinc Plant. No doubt the Smelter is somewhat strange to George, but he will find us very co-operative and will not be very long in finding his way around.

Then we have Geoffrey Mould from Research, as foreman of the Fuming Plant. Geof is no stranger to this department, as he worked in the Pilot Plant during its operation.

In closing, we would like to wish you one and all, *A Merry Christmas and a Happy and Prosperous New Year.*

NINE POINTS OF BEHAVIOR

Don't be inquisitive about the affairs of even your most intimate friends.

Don't underrate anything, because you don't possess it.

Don't contradict people, even if you know you are right.

Don't believe that everybody else in the world is happier than you.

Don't be rude to your inferiors in social position.

Don't repeat gossip, even if it does interest a crowd.

Learn to hide your aches and pains under a pleasant smile.

Learn to attend to your own business. This is a very important point.

SAFETY

N. IANNONE

ANOTHER Christmas has rolled around and we would like to extend Christmas greetings and a happy and accident-free year in 1952 to all our readers.

Vital statistics in a small department like ours are few and far between and we have none to report for this issue but we have some interesting facts which we would like to pass on.

DO YOU KNOW THAT: each year for the past five years approximately 15% of the total plant lost time accidents occurred at 10:30 a.m.?

Twenty-two percent of the lost time accidents occurred 2½ hours after the commencement of a shift.

Why should the peak period for accidents be at 10:30 a.m.? Evidently something causes the workman to relax his vigil after he works two hours; he does not keep his attention directly upon the work at hand or upon all surrounding conditions affecting that work or his safety and the safety of others. The following points may possibly explain the reason for this peak period of disabling accidents:

(1) The workman comes to work not feeling too well in the morning, possibly only suffering from a minor ailment. Due to working for a couple of hours he becomes worse and while attempting to carry on *an accident happens.*

(2) Tired from insufficient rest, the workman carries on until 10:00 a.m. then his head begins to nod and lack of concentration causes *an accident.*

(3) No breakfast or just grabbing a cup of coffee—two hours later the pangs of hunger start to gnaw, the workman starts thinking about food instead of his work and *an accident happens.*

Summing up, let us try to eliminate this peak period of lost time accidents in the plant by doing the things that we all have to admit we enjoy. Sufficient rest every night followed by hearty breakfasts and if possible, halfway through the morning shift, a stop for a few minutes for a rest period. Finally, to be extremely alert so that we can combat fatigue and its resultant illness and inefficiency which appears to crop up chiefly in the middle of the first half of the shift.

DO YOU KNOW THAT: one day in March 1951 after a slight thaw and then a light snow fall that thirty-seven men fell, and when we say fell, we mean their feet went out from under them and they landed squarely on their backs. This performance took place between 4:00 and 4:30 p.m. on the brow of the road just south of the Surface Change-house in spite of a well sanded pathway on the west side of the road that the employees could have used. Maybe it should not have been but were our faces red during this performance. Slipping conditions again will prevail this winter and perhaps it may mean taking a few more steps, but let us use the proper walkways and paths and eliminate these slipping accidents.





ROYAL TOUR—Their Royal Highnesses, the Princess Elizabeth and the Duke of Edinburgh, have come and gone. Their coming to Canada was the occasion for loyal and joyful receptions all across our great country by ex-servicemen and the general public in equal measure.

Their return to England leaves a closer tie to the Crown amongst us all. Suffice to say, without going into literary rhapsodies, that here are two young people who would be more than welcome to come and live among us any time. After all, Elizabeth is a Princess of Canada and Prince Philip has certainly proved to be a most acceptable Consort for our future Queen.

SPORTS—Cde. Bert Johnson's Sport department is functioning at full steam these days. The Bowling league is away to a good start with the Marines leading the pack. However, competition is keen and it's too early to forecast winners.

The Legion Midget Hockey team is putting on a good show and we are all pulling for them to bring home the bacon. Give them your support, fellas, by seeing and cheering them in action. Don't forget they are the potential National Hockey League material of tomorrow.

The Five O'Clock Rummy gang is still going strong. Did we hear that Ken got four deuces and even then couldn't "go out?"

The Canteen semi-monthly birthday parties have proven a grand success and affords the members an opportunity to celebrate all members' birthdays. This original idea seems to have gained the approval of the boys.

REMEMBRANCE DAY—Poppy Day was observed on Saturday, November 10th, with Cde. W. S. B. Lockhart as Chairman of this important event in our Remembrance Day ceremonies. Successful responses to both the street sales of Poppies and Wreaths have been reported.

Our Banquet this year was held in the Jubilee Hall, thus allowing more members and their lady friends to participate. For the first time we had a speaker from the "Silent Service" to address us, in the person of Lt. Com. L. G. Main, R.C.N. Commanding Officer of H.M.C.S. "Chippawa," Naval Training Division in Winnipeg. Lt. Com. Main delivered a very inspiring address and was warmly welcomed by the large crowd in attendance. Cde. President Clare Sparling made some very appropriate remarks concerning Remembrance in his President's speech. Cde. Archie Walker carried out his duties as Toastmaster in his usual affable and efficient manner.

The Remembrance Day service was held in the Northland Theatre at 10.30 on Sunday morning, November 11th, and a very good attendance of ex-servicemen and general public heard a particularly fine address from the Branch Padre, Ven. Archdeacon Rev. R. B. Horsefield. Stage arrangements in the theatre were very impressive under the direction of Cde. Bert Johnson.

LAST POST

Harry B. Brydon
2nd Btn. P.P.C.L.I.

Killed in Action—Korea.
October 1951



TO ALL COMRADES OF THE CANADIAN LEGION,
AND TO ALL EX-SERVICE MEN OF FLIN FLON.

Again comes round the joyful Christmas season with its message of "Peace on earth, goodwill toward men." I sincerely hope that as time goes on this message may become more burning and forceful and have new meaning.

The past year has been fraught with uneasiness and turmoil the world over. War has been the lot for Korea, cold war has been the lot for Europe, and in many other parts of the world there has been anything but peace. I sincerely hope there is a silver lining ahead of us and that you will be privileged to enjoy the calm of peace, and that settled conditions will again be the order of the day.

Some of the boys of Flin Flon are in far away Korea, to them in behalf of all of you I send special Christmas Greetings and wish them Godspeed and a safe return, and to all of you, with deep sincerity, I say the Merriest Christmas Greetings with the wish for a Happy New Year.

C. C. SPARLING,
President,
Flin Flon Branch No. 73.



Just to take your mind off the weather. Dominion Day beauties.

COMMUNITY CLUB

J. MULHALL

IT'S surprising how many ex-Community Club members one meets while on vacation. In North Vancouver the Dewhursts, Charlie Loney, the Cutts and Leo Dupas had occasion to compare our club settings with others and found nothing lacking. At Summerland, a Community effort under the guidance of the Crofts, Wades, Eyres and Colin Campbells put up and operated a three sheet curling rink. All were of the one opinion—they miss the old acquaintances and are great boosters for our way of doing things.

Three new members were elected from the plants this year. Joe Lavitt joins our executive as town representative. Joe can do us a lot of good with his experience in athletic fields. Fred Raven (Smelter), Geo. Barker (Mill), and Ken Huffman (Mechanical), bring a lot of ideas and know-how to the organization. Geo. Muggaberg (Electrical) is back for another term and can always be depended on to see both sides of the picture. Congratulations to our permanent Secretary, Howard McIntosh in his appointment to the Manitoba Physical Fitness and Recreational Council. Yours truly still has one year to go, and the H.B.M. & S. appointee rounds out the quota.

The main hall continues to be overcrowded with activities: Meetings, Army, Badminton, Hobby Shop, Basketball, Boxing, etc. Mrs. Milton's Kindergarten in the old library room is well attended as is Mrs. O'Neal's ballet and dancing classes with an added exercise class for ladies. Basketball is having a very big year. From here, I'd say the championships should remain in town as year by year there seems to be a very capable rookie crop of push-shot artists to carry Flin Flon's standards with the best in the province.

Outside playgrounds and rinks are still the problem child. This year they are under the jurisdiction of the newly appointed Parks Board, but in line with club policy complete co-operation can be expected in order to provide entertainment and safe places for the children to play. Could we suggest a bit more consideration from the youngsters and less vandalism. Rink schedules are pretty well crowded with the minor leagues and commercial hockey. Pleasure skating and free school skating are again very well attended. Plans are to have the popular Indian Boys Midget team from Sturgeon Landing here later in the season. Coach Shibicky has the Junior Bombers stepping right along with their clever passing attacks and it looks like this is their big year. The schedule calls for ten teams to show in the league



The Figure Skating Club give special attention to the youngsters.



One of the many uses of the Main Hall. Children's plays.



A little touch of Merrie England in Community Hall.

games this season, plus the three exhibition pre-season warm-ups. Congratulations to Manager "Bud" Simpson and the Bomber Executive for supplying such an array of talent for the hockey fans.

According to reports from the Hobby and Camera Clubs more and more members are taking advantage of the well equipped rooms. An effort is being made to contact an instructor for hobbies such as shell work, leather craft, and sketch club.

If registrations are any indication, the figure skating club should be overcrowded. Mr. Ferdinand Chatte and Miss Patricia Allen are in full charge again as instructors, to carry on the good work with plans for a carnival next spring.

The Elk's Junior Band will be with us again for all hockey games and special occasions, and the majorettes are real favorites with the crowds. The band room was enlarged a bit and a walk built over the boards to the ice, by the boys themselves. This is one organization that receives too little publicity and appreciation, for Band Master Seaby and the senior members have done a wonderful job.

A word to "teenagers" in or out of school. Jubilee Hall is yours every Friday night. So far the teen-canteen has been a walloping success.

I would like to thank all those who so willingly helped us throughout the year and sign off with *Best Wishes for a Merry Christmas and a Happy New Year.*

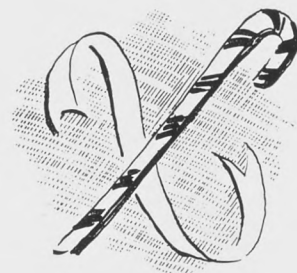
The Tumblers had an exceptionally good year.





To The Ladies

*"Pile on the logs, the wind blows chill,
We'll keep our Merry Christmas still."*



OPEN HOUSE ON CHRISTMAS MORNING: Could there be a more festive time to hold open house than on Christmas morning? "Come after your stockings are down—any time after ten." You're sure of a light-hearted time, for gaiety prevails even before the party begins. No need to drag in a lot of chairs from all over the house. This is the one time of the year when folks feel like sitting on the floor. After all, that's where the presents are—under the tree. You might even like to make up tiny stockings of nuts and candy and dime-store novelties, one for each guest.

Refreshments are little trouble when you let everyone help himself. Serve frozen orange juice from a punch bowl, decorated with fresh orange slices, cranberries and mint leaves; lots of steaming hot coffee and milk for the children; and in keeping with spirit of the holidays, fan-shaped buns filled with apples and cranberries. These delicious breads are a good contrast to all the sweet things you eat around Christmas time. Make Christmas fans the day before so you'll be free to join in the fun. Here's the recipe. It makes 16 to 20 extra-large buns.

CHRISTMAS FANS

- 2/3 cup milk
- 1/2 cup sugar
- 1 1/4 teaspoons salt
- 6 tablespoons shortening
- 2 packages or cakes yeast, active dry or compressed
- 2/3 cup warm, not hot, water (lukewarm for compressed yeast)
- 6 cups sifted enriched flour

Scald milk and stir in sugar, salt and shortening. Cool to lukewarm. Sprinkle

or crumble yeast into water (warm, not hot, water for active dry yeast; lukewarm water for compressed yeast). Stir until dissolved. Add lukewarm milk mixture. Add and stir in half the flour. Beat until smooth. Stir in remaining flour. Turn dough out on a lightly floured board and knead 8 to 10 minutes. The dough is kneaded enough when the surface is smooth and satiny and the dough feels springy and elastic and does not stick to the board. Put dough into a greased bowl and brush the top lightly with soft or melted shortening. Cover with a cloth; let rise in a warm place, free from draft, until doubled in bulk, about one and one-half hours. Punch down dough, pull sides into center, turn out on board. Cut dough into 4 equal parts. Roll each part into a strip about 6 inches wide and 14 inches long. Brush with melted butter or margarine. Spoon cranberry-apple filling down center of strip. Bring lengthwise edges of dough together and pinch firmly. Turn roll over so that pinched side is down. With a knife, cut roll into 4 even pieces. Place pieces on greased cookie sheet. Then with scissors, cut one side of each piece almost through 4 or 5 times. Spread apart like a fan. Brush again with melted butter or margarine. Let rise in a warm place, free from draft until doubled in bulk. Bake at 375° F. (moderate oven) 15-20 minutes. Remove from baking sheets immediately. Makes 16 to 20 large fans.

CRANBERRY-APPLE FILLING

- 2 cups chopped fresh cranberries
- 2 apples, minced
- 1/2 cup sugar
- 2 teaspoons cinnamon

Mix together all ingredients.

WHAT DO YOU KNOW ABOUT GLASS?

You may know the difference between a goblet and tumbler, but do you know the different types of glass and how to choose the right pattern for your table. From *Better Homes & Gardens* magazine come answers to common glassware questions. **WHAT** should I consider in selecting glassware? Look for quality and style harmonious with your home, mode of living and your other table furnishings. **HOW** can I be sure I'm buying quality? Quality shows in beauty, symmetry, and regularity of shape; clarity and brilliance; freedom from waves, flecks, bubbles, and irregularities. If decorated, watch for well-matched, even designs. A smooth rim and a clear musical ring when tapped with a pencil (except in the case of pressed glass) prove quality, too. **HOW** can I judge clarity of glass? Hold a piece to the light or against a pure white background. Turn it slowly as you look for waves or imperfections.

IS "crystal" more expensive than "glass?" No. Crystal denotes clear, instead of colored glass. To designate quality, one speaks of cheap crystal or good crystal. **IS** colored glassware in good taste? Yes, as a second set for special color schemes, it is an asset to your table furnishings.

CAN I buy open-stock glassware that will always be available? Yes, many fine old glass factories continue to make their best patterns over a long period of years.

WHAT items in crystal will I find most useful for all occasions? Beverage glasses of all types, sherbets, salad and dessert plates, flower bowl, salad bowl, mayonnaise set, candle-sticks, water pitcher, comports, cake or torte plate, salt and peppers, finger bowls, relish dishes and ash trays.



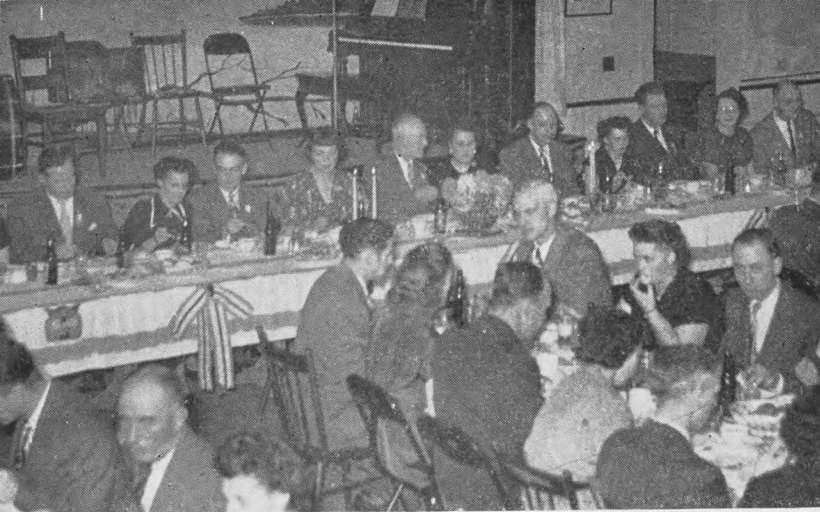
Is there any joy to equal that of opening gifts on Christmas morning?

WHAT height goblet should I buy? Medium-height goblets are best for all occasions. Tall stemmed goblets are appropriate for formal tables and dining rooms. **HOW** many glasses should I buy at first? A set of eight goblets and eight tumblers is usually the minimum for practical purposes.

WHAT is the difference between pressed glass and blown glass? Pressed glass is made in a mold. Blown glass is shaped by a glassblower at end of a blowpipe. Pressed glass is all or partially machine made while blown glass is entirely hand made.



We are happy to record the birth of John Steven Dix on November 29th last. He is the son of Mr. and Mrs. W. F. Dix (née Pauline Law).



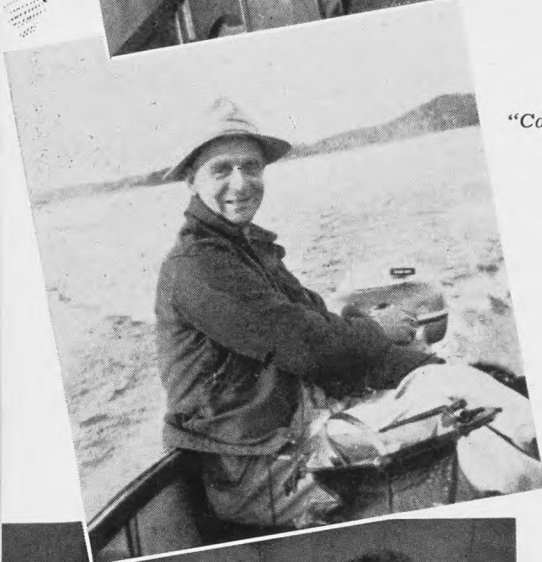
Social Club dinner and dance was annual October affair.



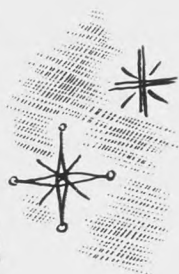
When it comes to dining the Electricians bow to no one.



Marg Ryan handles our stenographic work.



"Capt." Bill Sutton.



Carl Birston says goodbye to Supt. Cross.



Congratulations to Patrick Terrance O'Kane, University Scholarship winner.



ELECTRICAL DEPARTMENT

D. M. McRAE

NEWS seems to be an unknown quantity, however, we will dig down into the barrel and see what can be found.

Carl Birston has left the employ of the Company and there is a picture somewhere in these pages showing our Supt. extending to him the best wishes of all and sundry.

Our Social Club held their annual Dinner and Dance in October. It was well attended and a very enjoyable affair as you can see from the pictures taken that night. When it comes to eating, the Electrical Dept. bows to no man.

Speaking of pictures, we take special pride in presenting to you Patrick Terrance O'Kane, and I might add that there is no question of his nationality, as he is the son of Pat and Evelyn O'Kane. He passed his Grade 12 here in the Flin Flon schools with honours, and is now studying at the University of Saskatchewan. He is the proud recipient of a scholarship presented to him by the Hudson Bay Mining and Smelting Co. Limited. To you "Terry," we all wish you continual success.

The charming lady pictured with a smile is Miss Marg Ryan. She is a recent addition to our staff and handles the stenographic duties of the Dept. putting up all day with such characters as Messrs. Dowler, Whitbread and Goodmansson, which in itself, is no mean accomplishment.



D. "Mac" McRae and friends at Niakwa Golf Club, Winnipeg.



Family gathering of Kitchens at Toronto.



Linemen Kirkland, Ransom, and Killoh are proud of their new truck.

Miss Margaret Frost is visiting her father for the winter months. "Frosty," as he is more favorably known, is the generalissimo of the Shop. He is also the same guy who misses the broom most of the winter and tops his ball all summer. Of course, there are a few others who are in a like predicament but let us on to the next item.

Our mixed bowling League is still going strong and the balls on numerous occasions are still rolling happily down the gutters propelled by such trundlers as Petterson, Laing, Evans, Budlong, Haga, Saxbee and King. Their wives also are along to heave the odd ball and to see that the 10 p.m. draw starts on time. Frankie Stewart is in charge of the handicapping and headache dept. while the rest of us just go merrily along tossing the balls with very little regard for rules or foul lines.

In the picture of Bill Sutton you will notice the look of triumph on his face. I am not just sure whether it has something to do with the prostrate four in front of him or just because he has at last got the outboard motor to turn over. A full report is expected momentarily from the Watchmens' Dept.

And now that curling is in full swing we hear of some wonderful shots being made by the Linemen and Don Dow's tribe over in the South End. The odd report also comes from Tommy Manning, Warnick, Kitchen and Hammerstad. They all imagine they can curl but that is what keeps everyone happy.

The above picture, if you should notice it, is of three golfers. Your reporter and a couple of friends of his at Niakwa in Winnipeg this summer. It is just included to remind you that year after year about now we have these cold days, but it always gets warm again. So, folks, wherever you are, from all of us we wish you a *Very Merry Christmas and a Happy and Prosperous New Year.*

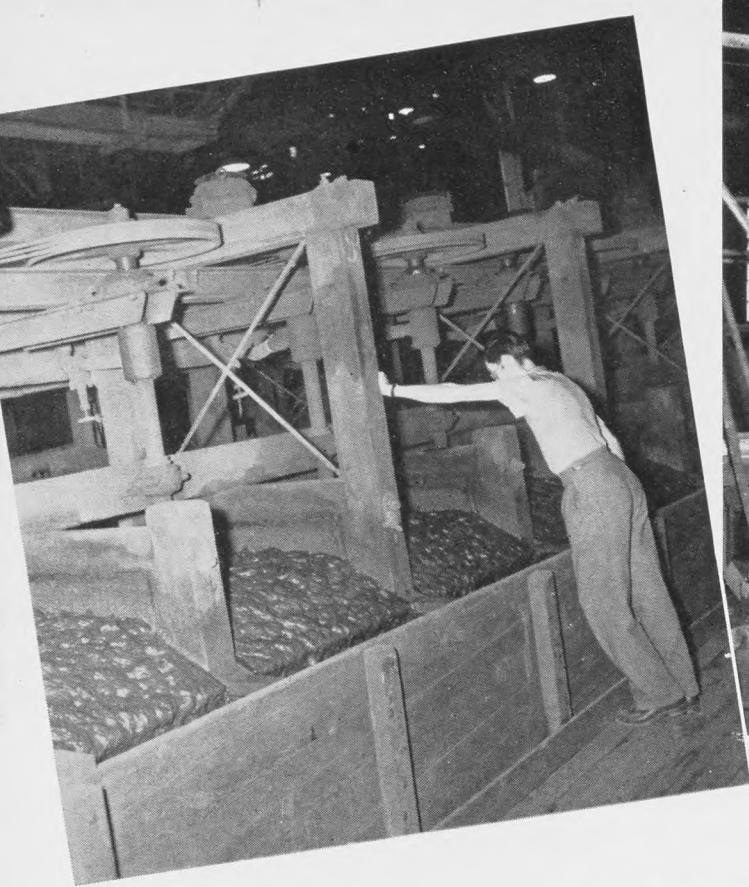


HELP THE NEW MAN

A number of new men have gone to work here during the past few months, and we welcome each and every one of them into the Acipco organization. We all remember when we too, were new men. We appreciated a little advice and a friendly spirit from our fellow employees.

These new men deserve that same co-operation that we received and appreciated so much when we were getting started. Of course, the foremen will show them the best and safest ways to do their work, but the old men can do a lot for the new ones until they are thoroughly familiar with their jobs.

Help the new man — for his good, for the good of the Company, and for the success of our safety program. Give him a hand! Help him to become a producer!



10 x 66 Hardinge ball mills.

Nuffield Scholarship winner studies flotation cells.

MILL and CRUSHER

J. McDONALD



WE extend a *very Merry Christmas and a Happy and Prosperous New Year* to this and all other departments in our wonderful organization.

The Mill and Crusher gang have again settled down for the winter, some to reminisce on the balmy summer holidays spent on trips or at summer cabins, while the winter sportsmen sigh and say, "Now we're getting something."

Curling rinks have been organized and some pretty keen inter-shift games have been run off.

The Recreation Club wound up with their yearly meeting and smoker

and a new executive have taken over and are well on the way for another successful year. The new officers consist of Past President, O. Snelgrove; President, D. Downs; Vice-Pres., V. White; Sec., Del Byers; and J. Goodman, W. Henderson, E. Grandison and O. Snelgrove to Executive.

The majority of holidays are over with the exception of those who prefer Christmas or New Year to the summertime and then there are a few ardent curlers who wouldn't think it was a holiday unless the bonspiel was on.

Among those who took trips this year were: Joe Howat and family, who went to the west coast and reports Tom and Mrs. Howat really enjoying their retirement. Fred Hollier, Cliff Lamont, Hank Snorro, Roy Cassidy, Gil. Goodwin, Fred Willis, Vic Sharpe, Alex Harsanyi, Ed. Van Doorn, Bob Burns and their families travelled far and near in the United States and Canada.

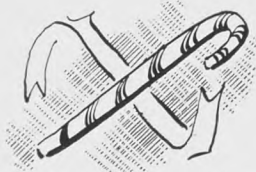
Del Davis was one of the last to take a trip this year, when he and Mrs. Davis motored to Salt Lake City to visit Ken and his wife.

Bob Archer spent a week at The Pas duck hunting and aside from a very costly blow-out on the left front tire, reports a very good shoot. Don McEachern and Don Lockhart, two of the Mill's most enthusiastic hunters, also report a very successful hunt down in the marshes.



Gyratory crusher.





Ernie Bucher and gang
built new tailings trestle
this summer.



Tailings line extension crew.

Boys from this department in the armed forces include: Geo. McIntosh, Ken Hanson, Buddy Bird, Bob Andrews and Clarence Bolton. Then we have Norm. Dow, who can now be considered a veteran, in Korea. To these boys we wish the Merriest possible Christmas and hope to see them all home again in 1952. Good Luck Fellows.

Congratulations to Mr. and Mrs. Duke McKenzie on the birth of a son.

Best of luck went with Mr. and Mrs. Walt Greenway, who left last fall for Winnipeg where Walt accepted a new position.

Murray Ferg won a successful race with the weather man building his new home in Willowvale. It was a pretty close finish, but Murray reports no snow drifts on the living room floor.

Ernie Bucher and his gang had a busy time last summer constructing a trestle across Flin Flon Lake. This trestle supports a launder carrying Mill tailings. Holes were drilled in the launder throughout its entire length and the tailings pour through these holes, gradually building up a dam of solids across the south end of the lake.

Wife to husband, "I won't be long, dear. I think I'll just change my clothes, do something to my hair, put on a little makeup and go as I am."



Dave Robertson and Wilf Burrows inspect
tailings dump.

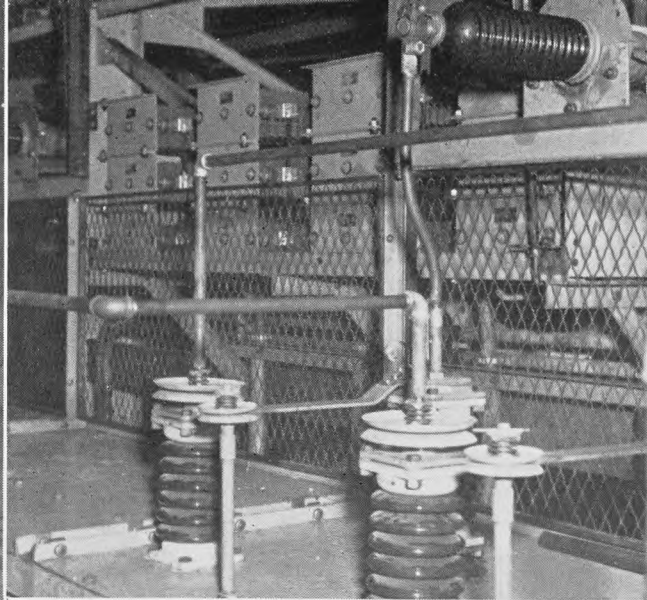


Del Davis' summer cottage, Lake
Athapapuskow.

Paul Riley and son David.

Del Davis entertained sister and brother-
in-law of Mrs. Davis, of Seattle.

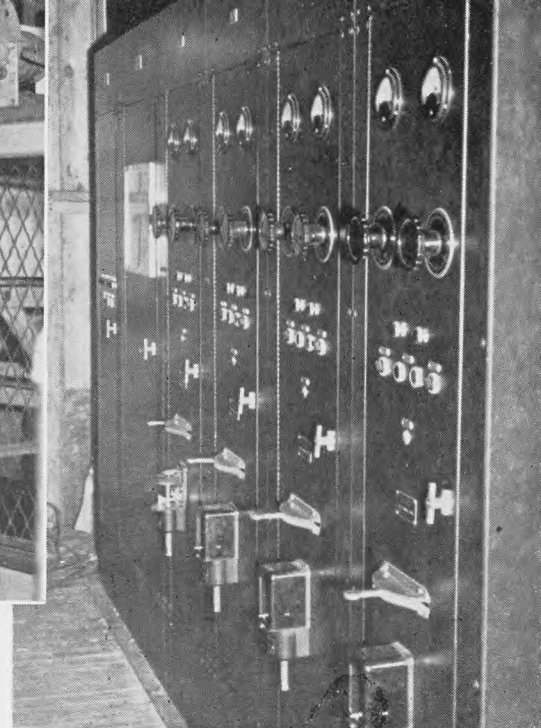




High voltage connections at top of cottrell.

High voltage connections in Control Room.

Cottrell control panel.



MECHANICAL and CONSTRUCTION

C. R. DELGATTY

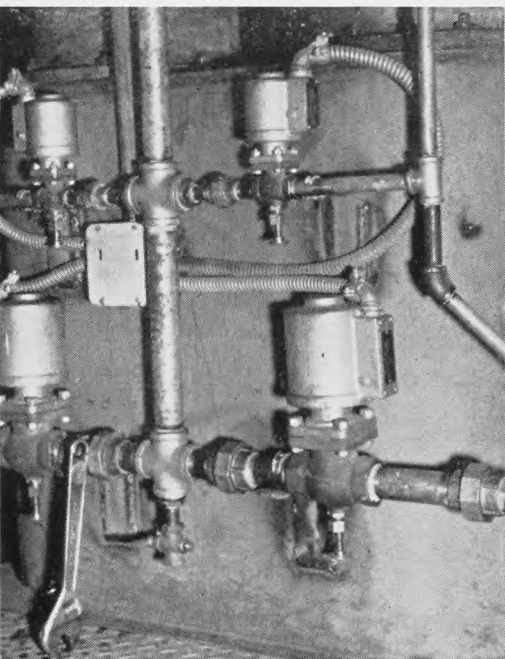
"WHERE are you working?" In this department the answer may be the drier, the fuming plant oil tanks, the lab. addition, the duplex apartments, North Star Mine, the new Flux line substation, or the Cottrells. Quite an article could be written on each one of these, so we will select the last.

Two new Precipitator Units have recently been installed here in connection with the expansion and alteration of the Smelter. These new units or Cottrells, as they are called, perform the task of recovering valuable particles of dust from the flue gases that arise from the various furnaces involved in the production of copper. These furnaces are the roasters,

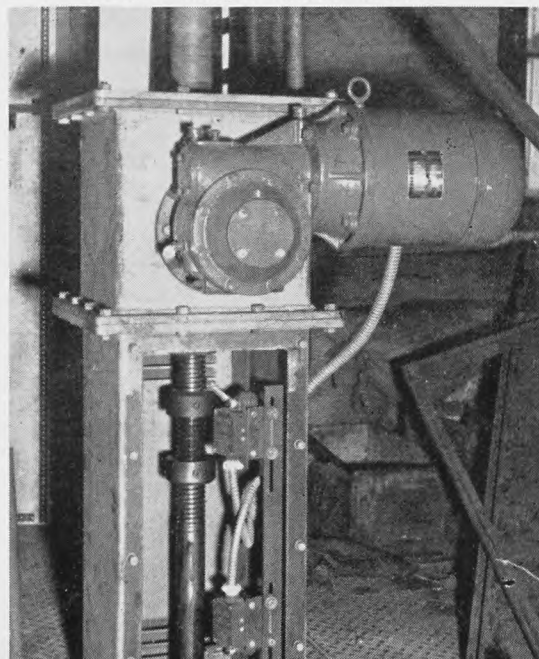
the reverberatory furnace, and the converters.

The Cottrells perform their recovery by an electrical process which consists of charging, with a high voltage, a system of wire curtains that are suspended in the gas stream. As dust particles pass these charged or ionizing curtains they become charged and are attracted to other curtains, made of pipes, that are isolated from the wire curtains but which are also suspended in the gas stream. When the particles reach the pipe curtains, they lose their charge, and stick to the pipes. At intervals these curtains are rapped to dislodge the particles which fall into the hopper below.

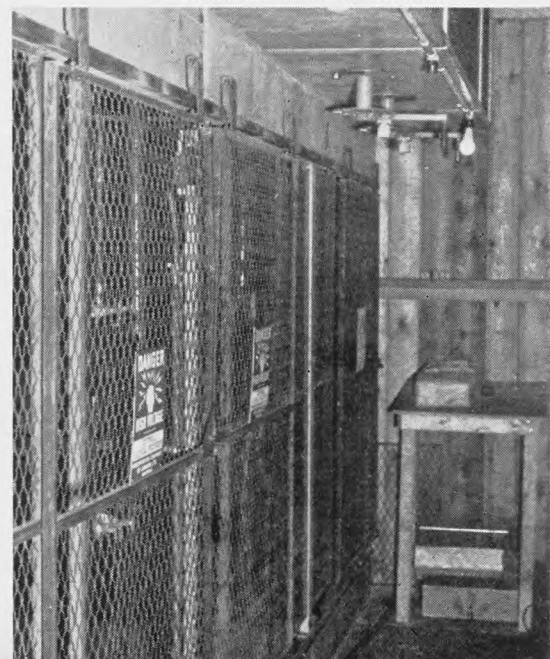
Cottrell rapper control valves.



Cottrell damper control drive.



Cottrell Control Room.





These boys installed the new copper cottrell.



Max McCutcheon and family on vacation in B. C.

The high voltage with which the wire curtains are charged is obtained by stepping up the normal power supply to 50,000 volts. The resultant high alternating voltage is changed to direct voltage by mechanical rectifiers, located in the power house.

So that is what happens in the Cottrells that keeps Al Hopkins, Hal Anderson and their crew busy 24 hours a day.

Dick Eger, machinist, has left the shop for the garage business. Harold Hall, who served his apprenticeship and worked as a journeyman machinist here, is now in Hamilton, at his trade. Good luck to each of you, Dick and Harold.

We welcome our new group of apprentices: Vern Fraser, Machinist; Peter Milton, Welder; Harry Hougan, Pipefitter; Bobby Lavis, Carpenter and Cliff Eagle, Tinsmith. We trust each of you will make a journeyman, and don't forget everyone is pulling for you.

Don Gummerson has returned to the boiler shop, forsaking his banking career. Oakley Southern, after three years in the R.C.N., is in the shop.

Another old timer has left us. Harry Elliott, who has been with the Company since 1930, resigned on account of ill health and has gone to Edmonton. Harry, veteran of the 1914-18 and 1939-45 wars, served as a commissioned officer in both. On the mechanical crew since demobilization, Harry was held in high regard by all who knew him. Our best wishes go with him to his home in Edmonton.

Guy Hume has a serious look about him. It's a boy!

YOUR SUGGESTION SYSTEM

W. A. COPELAND

YOUR Suggestion System continues to 'pay-off' to those suggestors whose ideas have been recommended by the Suggestion Committee. These cash awards have come in handy for the suggestor and are well worthwhile for the Company in that many of the suggestions recommend changes that result in the saving of time, supplies and material, all of which are worth money and that is the stuff most of us are interested in. There is an unlimited supply of suggestion money available at all times and only one way that you can get your share of it and that is by submitting suggestions. Your ideas may be the best in the world but if you don't get them on a suggestion form the committee will never know about them and then you are the loser.

As might be expected we receive complaints as to how the suggestions are handled, also about the size of the award cheques, and then we have complaints about the rejection of some ideas. Complaints are something that arise quite naturally with the operation of any suggestion system as it is normal for a suggestor to feel peeved when a suggestion that he has earnestly worked on is not given the consideration to which he thinks it is entitled. This attitude on the part of the suggestors is all to the good, for there should be a firm belief in one's own ideas.

(Continued on page 39)



Joyce Chittick came to Personnel from Bowsman. Leion and Mr. Flin Flon stepped out on Hallowe'en.



Congratulations to D. B. McGilvray on 25 years' service.

Doug. Evans married Florence Dagg, Oct. 16th.

MAIN OFFICE

HELEN MCCALLUM and ALEDA EAGLETON

IT'S the Christmas season again with everyone in a tangle of last-minute shopping and curling schedules, not to mention plans for the Christmas Party! But before getting all wrapped up in the excitement of Christmas and the coming of a New Year, we'd better review the happenings of the past three months . . .

We have three new faces in Personnel—Joyce Chittick from Bowsman, and Mary Evans and Evelyn Smith, both of Flin Flon. We have also lost a few of our girls—Pat Ransom of Publications and Jean Watson from Accounting took off for Montreal in October and we hear that things are going well with them and they have both accepted positions with C.I.L. Leion Clarkson has taken over the duties in the Publications Office. Martha Mac-Tavish evidently preferred the rattle of pots and pans to the peace and quiet of the Pay Office, and left us in October. Jean Jamieson and Genevieve Hudon each took a turn at relieving at Island Falls, and returned quite enthused about life at The Falls.

Wedding bells have been ringing in the Personnel Office—first for Lorna Franks and Bud Rogan of the Zinc Plant who honeymooned in Regina following a Melville wedding on August 31st, and for Florence Dagg and Doug Evans who had a Flin Flon wedding on October 16th, followed by a motor trip to the coast. Best wishes to both lucky couples for a lifetime of happiness. Rumors of wedding bells to

come—word has been received that Jean Kuby, formerly of Personnel, has announced her engagement to Al Hutchison of Stanford, Connecticut, the wedding to take place in the early summer.

Autumn vacationers included Naomi Smith, her mother, Lillian Smith from the Zinc Plant and her grandparents who enjoyed an extended automobile trip through the States in the early fall . . . Marilyn Burrows who took a flying trip to Nova Scotia . . . Mrs. Jennie Lacey who took a motor trip to Ohio with her son, and Sheila Sturley who enjoyed a trip to Eastern Canada and the United States. Laurie Johnson and Eddie Carate harvested their respective crops, but as yet neither will concede the "Spud-Growing Championship" to the other.

Our Main Office "Big Game Hunters" Ralph Bloomfield, Ted Sparling and Laurie Johnson took advantage of the abundance of ducks this fall and are mighty proud of their Ducks-on-ice.

Garnet Cluff—doing the foot work for the Bond Drive—reports the usual good response.

Congratulations to "Mac" McGilvray, Chief Clerk, who completed 25 years' service on Sept. 24th.

The gals and fellows of the Main Office wish for each and everyone of their fellow employees the *Happiest of Christmases* and breathe a prayer for a *Peaceful and Joyous New Year!*



Winter fishing is good here.



Control room operator
Neil Rutherford.

Railbirds Ches. Henry,
Stan Ferg, and Alex.
Strindlund.



Jack McInnes
dressing diver
Fred Baader.

ISLAND FALLS

W. R. SOUTHWORTH

WE have about the usual number of staff changes, weddings and new babies to report this time, along with a few other items. Taking them in that order, we have as our new chef de cuisine, Ed Lomax. Ed and his wife and two sons came to us early in July from Deepdale, Manitoba. Miss Marie Willis joined our office staff in September. Her home is in Dauphin, Manitoba. Miss Genevieve Hudon and Miss Jean Jamieson spent several weeks here last fall helping out in the office, then both returned to Flin Flon. Bob Smith came direct to Island Falls from Scotland about eighteen months ago. He worked here for a year but last October decided he would like to see more of this good country so moved on to Winnipeg. Mrs. Violet Wells moved back to Flin Flon last August. Her place on our dining hall staff was taken over by Miss Marion Pegg of Oxbow, Saskatchewan. Marion is chef Lomax's right hand man. Art Payette of Winnipeg came to work here in October.

Now we move on to the weddings; we just have one to record this time. On September 15th our Lee Lidgate and Roy Thompson were married in Flin Flon at the Anglican Church by Archdeacon Horsefield. After a honeymoon throughout Ontario and U. S. points, the happy couple returned to reside here. Lee was on our office staff for several years, and Roy has been in our transportation department for a year or so.

Now let us get along to the new arrivals. It seems we only have one to introduce this time and it is Douglas William, son of Mr. and Mrs. Scotty Boyes.

Douglas was born in Flin Flon on September 21st and they say he is a real "chip off the old block."

We had a crew of Einarson Construction Company carpenters here all summer, building six new houses for us. These fine new homes will be occupied by the Henry, Bracken, Pelletier, Bunn, Woods, and Strindlund families. We enjoyed having the Einarson crew with us. The Community Club held a very enjoyable smoker in their honour just before they left last fall.

As usual, as soon as the summer activities were terminated, the bowling and badminton leagues got going in top form, then the curling followed in short order. Looks like a banner year for these three popular sports.

The mass importation of jalopies last winter proved so popular there is likely to be another mild epidemic of this sort of thing this winter. We hear Messrs. Bunn, McInnes, and Grayson are all planning to import some rather ancient automobiles.

Each fall some of our boys slip out for a bit of duck shooting. They like the big, fat grain-fed mallards to the south of us. This year Roy Bunn, Jack McInnes, and Stan Ferg did their shooting at The Pas, but Jack Barkwell went farther afield for his birds. Jack went to the Hamiota district to shoot, and visited with some former Island Falls friends, the Max McConnell family. All the hunters report a full bag and a grand outing.

(Continued on page 39)

FUR BRIGADE



Red River carts leaving Fort Garry, 1863.

Painting by A. Sherriff Scott for Hudson's Bay Company.

THERE is no more thrilling story in the history of Canada than that of the fur trade. Three hundred years have passed since the first adventurers set out from Montreal, full of enthusiasm for exploration and discovery. The unknown country to the west and northwest was a challenge to the daring of men who knew no frontiers.

It is a story of hardship; of forest and prairies, rivers, rapids and muskeg; of canoes, York boats, Red River carts and dog teams; of intrepid explorers, Indians, hunt-

ers and traders. It is a story of teepees, tents, posts and forts; of knives, guns and rum; of muskrat, mink, beaver, bear and buffalo. It is the story of Canada and the men who loved the sight and sound of its great waters.

We who live North of 50° can, in the stillness of a summer evening, see the small columns of pungent smoke rising from Indian campfires. From The Pas to Sturgeon Weir, Cumberland House to Beaver Lake and Pelican Narrows to the Churchill and beyond are to be found the

descendants of the old warriors who travelled lake and portage with the fur brigades. Even today, Northern Manitoba has its links with the past and names like Cadotte, Umphreville, Sinclair, Ballentine and McKenzie are quite common.

To (Medard Chouart) Groseilliers and Pierre Esprit Radisson must go the honour of being the country's first fur traders, for it was in the middle of the 17th century that these two adventurers left Montreal for the west. Several voyages were made, but it was from their fourth expedition that we are able to gather information of any real importance. Radisson writes of skirting the south shore of Lake Superior, observing copper deposits, westward to the "prairie meadows where the Indians grow corn, and elk and buffalo are found," which would be towards the Mississippi River. The country of the Sioux was reached, while to the North East were the Crees; so it can be assumed the region was what is now known as Minnesota. The true location of their travels is somewhat vague. It is doubtful if they ever saw Hudson Bay or James Bay.

On their return to Montreal they were fined the almost unbelievable sum of £10,000 for illicit trading. Being Frenchmen they went to Paris to seek restitution, but were unsuccessful. Nor did they prevail in their efforts to persuade the French in Paris, or even Quebec, to explore the Hudson Bay area, of which they had heard so much from the Indians. In desperation they turned their faces towards New England, where, in Boston during the year 1664 they brought their proposals before the merchants of that town. After much effort they managed to engage a New England ship and actually reached Lat. 61° at the entrance to Hudson Straits, but the skipper was afraid to proceed farther and the voyage was abandoned.

Discouragement faced them at every turn, until, through the influence of Carteret they got an audience

with King Charles II in October 1666 who promised them a ship as soon as possible with which to proceed on their long-planned journey. Now their fortunes seemed to be changing. The Dutch Ambassador De Witt tried to induce them to desert England and sail under Dutch auspices. This offer was refused.

Then England's offer fell through on account of the war with Holland, only to be revived through the influence of Prince Rupert, the King's cousin. The Royal House of England showed great interest in trade at this time, which boded well for these two enthusiastic young Frenchmen. A company was formed and a charter obtained. In 1668 the project assumed definite shape and finds Groseilliers aboard the Nonsuch, with Captain Gillam in command, and Radisson in the Eaglet, under Captain Stannard. The Nonsuch explored Hudson Bay from Lat. 75° in Baffin Bay to the south-east corner of the Bay which would have brought him within 150 miles of the nearest French settlement. Here

Winter packet left Lower Fort Garry for the last time in 1909.

Painting by Chas. Comfort, for
Hudson's Bay Company.





*Henry Kelsey first to see
buffalo on the prairies, 1691.*

Painting by
Chas. W. Jefferys, for
Hudson's Bay Company.

they found a camp of Swampy Cree Indians, held a parley and obtained an agreement to occupy certain territory. And here was built "Charles Fort," named in honour of their gracious sovereign. After a winter of exploration and trading, they left the Bay, called at Boston and returned to England to give an account of their very successful voyage. This was the beginning of the great movement which, though making little stir in London at the time, was the first of a long series of important and far-reaching discoveries.

Of the Eaglet with Radisson aboard, no such record of accomplishment remains, since, after venturing upon the journey and almost reaching the Straits, Capt. Stannard felt the enterprise to be an impossible one, and returned to England.

Trading into Hudson Bay was now a reality, developing slowly and increasing gradually, spreading to the west side of the Bay where additional forts were established. Ships came regularly from England loaded with trade goods. The chief items were brass kettles from 5 to 16 gallon capacity, knives of all sorts, hatchets, tobacco,

co, glass beads, red lead, mirrors, fish nets and pewterware.

For over a hundred years trade was confined to the shores of Hudson Bay so far as the English companies were concerned, while the French from Eastern Canada went far to the west via Lake Superior and the Grand Portage. To the Bay came Crees, Chipewyans and Eskimos. As competition became keen between the French and English traders, many earlier injustices were eliminated and a better price paid in barter. In the 1670's prices were somewhat stabilized as follows:

Guns—12 winter beaver skins.

Gun powder—1 winter beaver skin for ½ pound.

Shot—1 winter beaver skin for 4 pounds.

Knives—1 winter beaver skin for 8 jack-knives.

Beads—1 winter beaver skin for ½ pound.

Plain red coat—5 winter beaver skins.

Women's coat; laced—5 winter beaver skins.

Tobacco—1 winter beaver skin for 1 pound.

Kettles—1 winter beaver skin per pound of kettle.

Mirror and comb—2 winter beaver skins.

Trading at the posts on the shore began as soon as the rivers were open — the Churchill, Nelson, Hayes — so that when the ships arrived from England about the first of August, the Indians had reached the coast with their winter catch. The ships then sailed for England, reaching there in October.

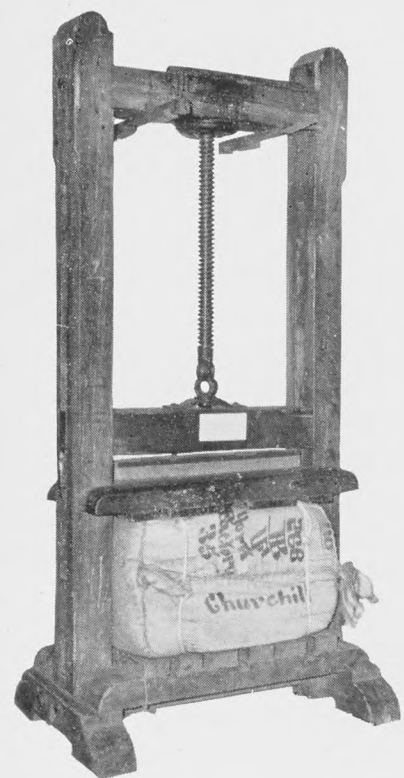
By 1684 the effect of English trading into Hudson Bay became a matter of great concern to the French. Trade which had hitherto gone to Montreal was now going to Hudson Bay. Sieur Duluth was sent from Montreal to investigate, and, rashly it seems, promised the French Governor of Quebec "that before two years have passed, not a single savage will visit the English at Hudson Bay." In this he was quite wrong.

At this time Michilimackinac (Mackinac) at the northern tip of the Michigan peninsula was the depot of the west. To it came expeditions from the east and the south, and it became the great rendezvous. To this place came Pierre Gaultier de Varannes, Sieur de la Verendrye.

Verendrye, following the route of Radisson and Groseilliers, obtained from an experienced Indian leader at Lake Nipigon, encouraging information of the furs so abundant in the "far" west. From crude maps drawn on birch bark, he estimated that Lake Ouinipigon (Winnipeg) might be reached by an inland journey from Lake Superior of 500 leagues (1,500 miles). The Governor of Quebec granted La Verendrye the entire profit of the fur trade, but would give no assistance in money. With trade goods provided by Montreal merchants he reached Michilimackinac and by the end of August 1731 his brigade was at Pigeon River, on the Grand Portage, a point about 40 miles south-west of the mouth of the Kaministiquia River. This brought him into the country of the Crees and Assiniboines, Indians as to whose friendship he could not be sure. His

journey was hard and long, his men sulky and discouraged, yet La Verendrye stood out as an example of heroism and determination. On reaching the head of Rainy River he built his first fort and called it St. Pierre. The following year he built Fort St. Charles on the south side of the Lake of the Woods. Pressing farther west, he arrived at Lake Ouinipigon (Winnipeg) in 1733 and built Fort Maurepas. His purpose now was of a dual nature. At heart an adventurer and explorer he wanted to combine the fur trade with expeditions which he hoped would bring him to the Western Sea. But no funds were available and he could proceed little farther without money; he was, perforce, to confine his trading to the area between Lake Winnipeg, along the Grand Portage to Lake Superior and Mackinac.

Then misfortune and disaster overtook La Verendrye's men and a party of twenty men were massacred by the Sioux on an island near Fort St. Charles. Disheartened, yet determined to seek the broad prairies of the West, and having been once more refused financial assistance, he set out, penniless and in debt, seeking new worlds to conquer. In September 1739, with five men, he struck out from Fort Maurepas for the unknown land. Crossing the south-east expanse of Lake Winnipeg he entered the mouth of the Red River and reached the forks of the Red and Assiniboine. Thus it was, on September 24, 1739, that the eyes of the first white man fell on the site of what is now Winnipeg, the great central city of the West. Here he met a few Cree Indians whose fur had been traded to the English on the shores of Hudson Bay. Pushing westward it took him six days by canoe to reach the portage across which furs were taken to Lake Manitoba on the route to Hudson Bay. On this portage now stands the city of Portage la Prairie. The Indians here were very friendly and La Verendrye decided to build a fort. This he called Fort de la Reine. It is interesting to note the skill with which the early French explorers dealt with the Indians.



Method used to bale furs in the early days.

and to see the formal way in which they took possession of the lands visited. La Verendrye assembled the Indians, gave them presents of powder, ball, tobacco, axes, knives, etc., and in the name of the French King received them as the children of the great monarch across the seas, and repeated to them several times the orders of the King they were to obey.

Going northward over the Portage la Prairie, Verendrye's sons had discovered what is now known as Lake Manitoba, and had reached as far as the Saskatchewan River. They had founded Fort Dauphin, and at Cedar Lake built Fort Bourbon. They even ascended the Saskatchewan to the forks, which were known as the Pascoiac. Tardy recognition of Verendrye's achievements came from his government and he was given several honours in recognition of his discoveries. He was about to proceed on the great expedition which was to fulfil his hopes of finding the Western Sea when, on December 6th he died without his dream being realized. He was a man of great executive ability, and one who dearly loved his King and country. He stands out in striking contrast to his successors who disgraced the name of France in the New World. La Verendrye's sons received no consideration, they were

coolly passed by, their trade goods seized, and in disgust, deserted the country. It is significant that only a few weeks after the departure of the Verendrye's, Fort la Reine was completely destroyed by the Assiniboines.

The fur trade was continued by the French in much the same area, so long as the country remained in the hands of the French, but two years later, French power came to an end, and in less than a generation afterward, the Western Sea (Pacific) was discovered by the British fur traders.

The capture of Canada by Wolfe in 1759 completely changed the course of the fur trade in the West. Western forts fell into decay and only French Canadians with Indian wives remained behind. At least, nothing French was left. Not an army officer, not a fur trader was left west of the Grand Portage. The French in Mackinac refused British rule. One old trader, Jean Baptiste Cadot, with his Indian wife, for years refused to yield, so that the French flag continued to float over the fort at Sault Saint Marie long after the fleur-de-lis had quit the ramparts of Quebec.

For years the fur trade was not carried on.

The suppression of the Jacobite Rebellion in Scotland in 1745 led to the disper-

sion of many young men of good family beyond the seas. After the American Revolution, many Scottish settlements remained loyal and came to Montreal. Thus, the English-speaking merchants who came to Canada were largely Scottish, and it was these Scottish merchants characterized by perseverance, thrift and fidelity, who revived the fur trade in the interior.

Archbishop Tache, a famous French Canadian, long known in the West, says:—"Companies called English, but generally composed of Scotsmen, were found in Canada to continue to make the most of the rich fur trade of the Northwest. They accepted the cooperation of French Canadians, which explains how, after the Scotch, the French Canadian element is the most important."

First to leave Montreal for the far West was Alexander Henry in 1760. Five years later he held a license for "the exclusive trade of Lake Superior." He bought trade goods for which he agreed to pay 10,000 good merchantable beavers. He found the Indians very poor, but trusted them and they repaid fully the trust he displayed in them.

Following Henry came another Scot, Thomas Curry, who pushed west with four canoes and a band of voyageurs, along the route taken earlier by La Verendrye, even as far north as Cedar Lake on the big Saskatchewan River. His one trip was so successful, his furs giving such a handsome return that he was satisfied never to go back to the Indian territory. In 1768, another intrepid Scotsman, James Finlay of Montreal, found Curry's route and ascended the Saskatchewan to Nipawin, which is as far as Verendrye had reached.

Other expeditions were less successful. Indian tribes plundered trader's goods and in some instances compelled a trader to leave at least a part of his goods with them before being allowed to proceed.

Two of the most successful traders of the West were Englishmen — two brothers, Benjamin and James Frobisher of Montreal. These pushed into the interior,

took the lead in making alliances with the Indians, a mixture of cooperation and force which proved, at that time at least, to be the best and perhaps the only way to do business with them profitably. Trade to the Northwest was largely developed at the hands of the Montreal merchants. The Grand Portage ending at Kam River may still be traced, but the bustle of the voyageur is no more. Along this portage in 1783 over two hundred and fifty men were employed. There were canoes of four tons burthen, each managed by eight to ten men, and employing another two hundred and fifty men to bring the goods across Lake Superior. At this end of the portage were the "coureurs de bois" who lived on game and dried meat and buffalo, who journeyed west in canoes each carrying about a ton and a half. Runners along the nine mile portage around the falls at Pigeon River were known to make the portage and return in six hours, carrying 150 pounds each way. From the west end of Grand Portage the canoes were loaded two-thirds trade goods, one-third provisions, to be rushed while the summer season lasted, to Lake Winnipeg, along the Saskatchewan, to Edmonton and far-off Athabaska. The vigor, energy and skill that characterized these mixed companies of Scottish traders, French voyageurs and half-breeds has a strong appeal to lovers of the picturesque and heroic.

Between the Hudson's Bay Company, trading into Hudson's Bay, and the Montreal traders, competition gradually became more disturbing. The Frobishers, with their keen business instincts and daring plans, saw that the real stroke which would assure their future was to divert the stream of trade then going to the "Company" on Hudson Bay, to Lake Superior and Montreal. Joseph Frobisher established a post at Sturgeon Lake on the Saskatchewan. This site was well chosen. Northward a water course could be followed by which the main route of water communication from the great northern districts to Hudson Bay could be reached



Chief Trader McDonald descending the Fraser, 1828.

Painting for Hudson's Bay Company
by A. Sherriff Scott.

and the Indians interrupted in their annual trips to the Bay forts at Churchill and York Factory. But the "gentlemen adventurers" reached out with a new vigor to grasp the rich fur trade of the interior. Two years after the Frobishers' challenge at Sturgeon Lake, Samuel Hearne, an officer of the Hudson's Bay Company arrived and established Fort Cumberland, a scant two miles from one of Frobisher's forts.

The building of Fort Cumberland led to a consolidation on part of the Montreal traders. Within a year, Alexander Henry, the Frobisher brothers, Trader Cadot and an adventurous trader from the States named Peter Pond, determined to stop the northern Indians from taking their fur to Hudson Bay. Cadot with four canoes went west on the Saskatchewan and built a small fort near what is now Prince Albert. Henry and the Frobishers, with ten canoes and forty men went towards the Churchill River, building a fort at Beaver Lake on the way. Next year they turned

westward from the Churchill (or English River as Frobisher called it) and Thomas Frobisher reached Lake Athabaska with trade goods. These men were not lacking in the ability to plan and execute, and for fifty years a battle royal was fought for control of the fur trade coming east from the great Northwest. This competition between the two companies produced disorder and confusion among the Indians, whose nature is usually excitable and suspicious. The rival traders lost no opportunity to prey on the fears and cupidity of these simple natives of the woods. Each accused the other of malpractices and at times the rivalry resulted in violent outbreaks. Feeling against both parties was aroused by injustices, real or imagined. The Assiniboines, a northern branch of the Sioux, were the first to resort to the tomahawk. Poplar Fort, on the Assiniboine, was destroyed with some loss of life, and it began to look as if a general Indian uprising was in sight. All that seemed to have prevented it was an epidemic of smallpox which struck the natives down in terrible numbers. The Assiniboines had gone on a war expedition against the Mandans of the Missouri River and had brought back the dreaded infection which had been the scourge of the Mandan camps. Disease spread over the whole country and several bands of Indians were completely wiped out. Of one tribe of four hundred, only ten remained, while the survivors carried the disease with them to other bands in their search for succour. By the end of 1782 fur trading was practically at a standstill. The decimation of the tribes, the fear of infection by the traders, and the general fear cast over the country, turned the thoughts of the natives away from war.

The movement into the interior, by the Hudson's Bay Company started from Fort Prince of Wales, westward along the Churchill River. Samuel Hearne, on his return from the discovery of the Coppermine River, undertook the difficult task of winning over the Indians from the seductive influences of the Montreal traders. It

is due in great measure to the advice of Moses Norton, an Indian educated in England, that the Company were able to penetrate the interior of the country. It was their intention, not only to develop the trade of the west, but to push their posts especially to that part of the country which hitherto had been the source of supply for the Eastern traders. From their position of advantage on the Bay they could reach points on the Saskatchewan at least a month earlier than their rivals. In 1790 the Company crossed south from the northern waters and erected a trading post at Swan River, near its mouth on Lake Winnipegosis. From here they went to the Assiniboine and built Fort Pelly, and even went so far into their rival's territory as to establish posts at Rainy Lake and Red Lake.

But it was to the west and northwest that the real and profitable expansion developed. From Cumberland House, to Ile à la Crosse they went, well up towards Lake Athabaska; while in the south an important centre was established near what is now Brandon. The same activity continued the following year, giving them control of the upper Saskatchewan as far as Edmonton. In 1796 another post was begun on the Assiniboine River, probably near Portage la Prairie, while a year later Fort Carlton was erected on the Saskatchewan as the half way house to Fort Edmonton.

Such was the condition of things, so far as the Hudson's Bay Company was concerned, at the end of the century. In twenty-five years they had expanded their trade so that it extended from Rainy Lake, north along the west shores of the Bay and all the territory west to Edmonton and north to Athabaska. There was still severe competition from the Montreal traders and undoubtedly the profits of each were greatly diminished. The "Company" however, had one decided advantage. Their men were mostly from the Orkneys and were a steady, plodding and reliable class. They conducted the affairs of their

employers economically while the employees of the Montreal merchants were a wild, carefree, reckless lot, much addicted to drink, and consequently less dependable. Competition between the two rival bodies of traders resulted badly for the Indians who became debauched and lazy and degenerated through the excessive use of liquor imported by these rivals in commerce. One thing had, however, been clearly demonstrated, that the effect of this competition drew the "Company" from the Bay and forced them to their source of supply to the west, and as we see it today, to the quicker development of the great Northwest that may not have been otherwise.

It was inevitable that the two great Companies amalgamate, and while it changed conditions in the West and opened the door for peaceful migration and settlement, it is not an essential part of this story.. It is of the fur trade and the life of the traders and the transportation of the early days that we are concerned with.

The great prairies of Rupert's Land with its many rivers afforded a picturesque life for the prairie hunters and traders. The frozen, snowy plains and lakes were crossed in winter by sleighs drawn by dogs commonly called "Huskies." In summer, the lakes and rivers, formerly skimmed by canoes during the first fifty years after amalgamation, were, for the most part replaced by York boats. Transportation across the prairies was effected by carts, entirely of wood, drawn by oxen or Indian ponies. One of the most stirring features of prairie life was the departure of a brigade with the hunters and their families on a great expedition for the exciting chase of the buffalo.

Transportation was the lifeblood of the west, and a study of the methods is interesting and informative, since there is even today much of the Northwest where primitive means must be used to reach outlying places.

Under Governor Simpson, communication with the interior was reduced to a

system. The big winter event at Red River was the departure of the North-west packet in mid-December. From this place, all the posts in the north were reached. Sledge or toboggan, drawn by from three to seven huskies, raced across the pathless frozen plains, rivers and lakes. The dogs carried their food consisting only of fish, on which they lived, being allowed at the close of the day's run, one frozen fish. Forty or more miles was a good day's run, with nights spent in the shelter of the trees with spruce boughs for ground cover at temperatures of 30° or more below zero.

The winter packet ran from Fort Garry to Norway House, a distance of 350 miles. At this point the packet was rearranged, a part of the freight being carried eastward to Hudson Bay, the other portion up the Saskatchewan River to the western and northern forts. The party which had taken the packet to Norway House, received the packages from Hudson Bay and returned to Fort Garry. The western mail from Norway House was taken by another sledge party up the Saskatchewan, leaving packages at posts en route, to its destination, Fort Carlton. The return party from that point received mail from the North and hastened back to Fort Garry by way of Swan River post distributing its treasures to the posts as it passed and reaching Fort Garry about the end of February.

At Carlton runners from Edmonton and the upper Saskatchewan made rendezvous, deposited their packages, received the outgoing mail and returned to their homes. A new set of runners left Carlton with the Fort Garry mail and went to the Mackenzie and Athabaska districts. Thus, at Carlton the three parties met, from Fort Garry, Edmonton, and Athabaska. Each brought a packet and received another in return. The return packet from Fort Carlton to Fort Garry, arriving in February, took up the accumulated material, went to Norway House, from whence they had started in December, thus carrying the Red River spring packet.

At Norway House it was met by another express known as the York Factory spring packet which had just arrived. The runners on these various packets underwent great exposure, but they were strong and fleet, and resourceful in storm and danger.

The transition from winter to spring is often rapid, on the Prairies. Ice upon the rivers and lakes quickly becomes honey-combed and unsafe for travel. No sooner were the waterways open in the fur trading days than supplies and fur were rushed from one part of the country to another by means of York boats. The York boat was introduced by Governor Simpson of Fort Garry, who found it safer and more economical than canoes. Each boat could carry three or four tons of freight, and was manned by nine men, one being steersman, the rest oarsmen.. Four to eight of these craft formed a brigade and the skill and speed with which these boats could be loaded or unloaded, carried past a portage, guided through the rapids or across wide lakes was the pride of their Indian or half-breed "tripsmen" as they were called.

The route from York Factory to Fort Garry being one long and continuous waterway, was a favorite course for a York boat brigade. There were many brigades, many routes used to bring the great loads of fur from the interior. In the early days of Governor Simpson these were carried to Fort Garry along the length of the Saskatchewan past Cumberland House and Grand Rapids to the mouth of the Red River. From York Factory, a load of general merchandise from far-off London would go to Fort Garry. Lake Winnipeg is usually clear of ice in June, and the first brigade would then start with its seven or eight boats loaded to the gunwales with fur. A week later a second brigade would leave, so as to keep clear of each other on the many portages from the Bay. The return, with full supplies for the settlers, was eagerly looked for and the complete return took about nine weeks.



Canoes of four tons burthen were used on Lake Superior.

By York boat, goods in bales were taken far into the interior. One of the best known routes and of particular interest to us in Northern Manitoba, was that called the "Portage Brigade." This ran from Fort Garry, up Lake Winnipeg to Grand Rapids, along the Saskatchewan northward, past Cumberland House and Ile à la Crosse to Methy Portage, where the waters part, on one side going to Hudson Bay, on the other to the Arctic Ocean. The trip to Methy Portage and return took about four months. At this portage the brigade from the Mackenzie River arrived in time to meet that from the south, and was itself soon in motion, carrying its supply of trade goods for the far North.

The speed with which these boats could be laden was amazing. A good half-breed crew of nine men could load and pack a complete load in five minutes, a matter of much importance with so many occasions for transshipment. Made up in packages of about 100 pounds each, it was the job of the steersman to load two of these onto the backs of each of the tripsmen when making a portage.

With the settlement of the midwest, the lakes and rivers were insufficient to carry on the increasing trade of the country with the result that some form of summer land transport became necessary. So the Red River cart was evolved, a two-wheeled

vehicle made entirely of wood, without the use of iron in any way whatsoever. The wheels were large, being five feet in diameter, the hubs thick and very strong. Axles and even lynch pins were of wood. A light box frame, tightened by wooden pegs was fastened to the axle with more wooden pegs. Harness was made of ox-hide, termed locally "shaganappe." The carts were drawn by single ponies or oxen. The Indian pony, with a load of four or five hundred pounds in the heavy cart behind him, would go at a measured jog-trot some fifty or sixty miles a day. With a heavy load of eight hundred pounds he would travel an average of twenty miles a day.

One of the most notable cart trails on the prairies ran from Fort Garry to St. Paul, Minnesota. At the period when the Sioux Indians were in revolt in 1862, this route was dangerous and several brigades of ten carts to a brigade would proceed under the protection of a guide vested with much authority. He rode on horse-back marshalling his forces and managed the spare horses or oxen which often amounted to one-fifth of the number drawing carts. Although the use of the Red River cart can hardly be said to have been an essential form of transportation so far as the fur trade was concerned, it is



A York boat —
freight carrier of
the early days.

definitely a symbol of the inventive genius of the early traders. As the Red River Valley became settled, buffalo meat formed the chief meat diet and it is notable that in 1840 a buffalo hunt on the plains comprised as many as 1,630 persons using 1,210 Red River carts.

It may seem that too much emphasis has been placed in this article on the early history of the fur trade to the exclusion of those noble men who explored the far north and west. But it is a long story and the names of Simpson, Mackenzie, McDonald, Douglas, McDougall, the McKays

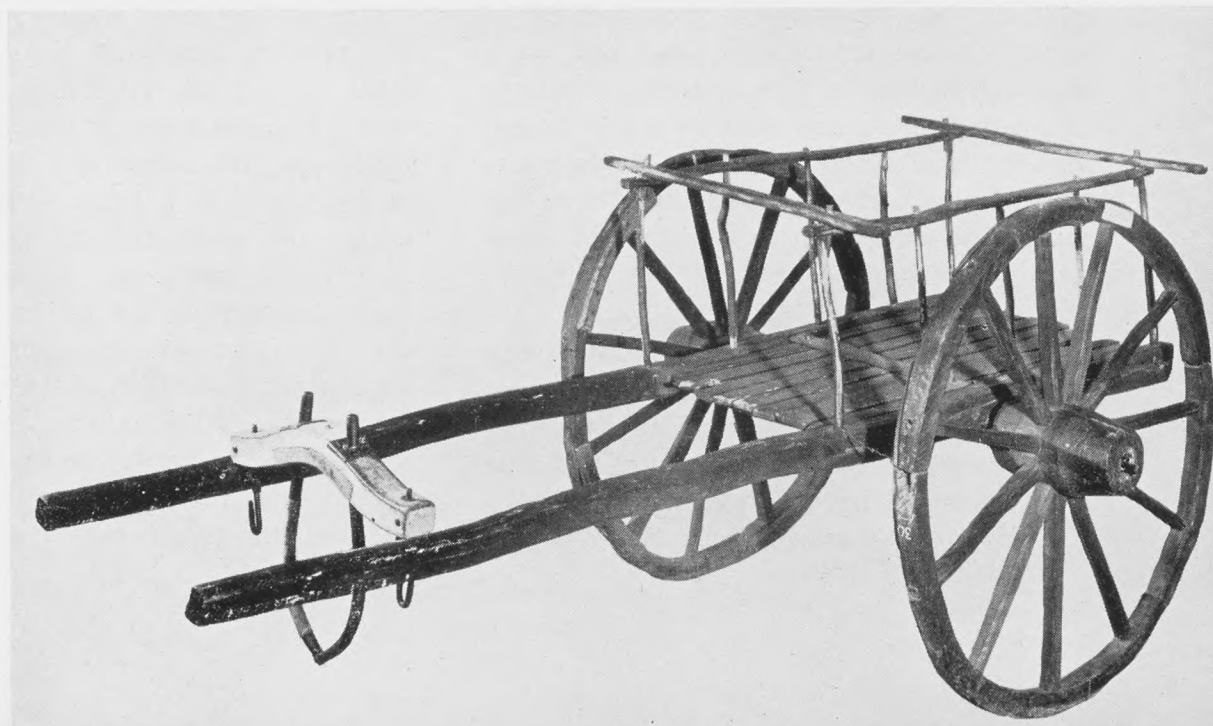
and many others, belong to the later history of the fur trade. Theirs is a separate glory and they lose nothing by not being mentioned here. Their tale will be told in these pages some other time.

SOURCES:

The Remarkable History of Hudson's Bay Company by Geo. Bryce, M.A., LL.D.

Pathfinders of the West by Agnes C. Laut.

Blankets and Beads by J. G. MacGregor.
Hudson's Bay Museum, Provincial Archives.



The
Red River
cart —
famous
all-purpose
wagon.

RESEARCH

BRUCE STEWART

THE biggest news around the Research lab. this Christmas is the new building rising beside the present main lab. Where lay a windswept snowbank last December with a narrow path venturing through the snow toward the gate, now stands part fulfillment of the hopes through many years. For some weeks floor plans have been floating about while the various fellows concerned try to envision themselves in their new surroundings to be. A considerable amount of "researching" has gone into the location of electrical outlets, floor drains, bench styles, and like problems, with the practical eye also taking note of possible coffee sites and, of course, the view — three choices, crusher, main office or machine shop — from various windows.

The building itself will be a two-storey steel structure, the upper floor having offices for Mr. Carr and Larry Griffiths, Fred Matthews, and Ed Paull, with their computer gadgets; and stenos Joyce Guymer and "Bunny" Martin. One of the most attractive features of the new set-up will be the large, quiet library with roomy work tables and sufficient shelves to hold the books — right now the shelves are augmented by the floor and its literally quite possible to "stumble" over a valuable piece of information.

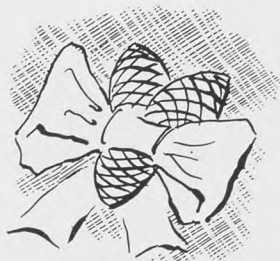
As you will have noticed the pictures in the Research section of this Christmas issue are all of the boys in the mill lab. Since they seem to be the ones making the news in the past few weeks we thought we'd feature them together.

Don Semple has proudly, although we must admit, a little bashfully announced his engagement to Dorothy Dagg. The wedding is to take place over the holidays. Congratulations and best wishes, Dorothy and Don.

Fred and Mrs. Brien have recently become the proud parents of a bouncing 7 pound baby boy—Frederick Stewart. Congratulations again — and here we note for the benefit of future fathers in this department that Fred had set a commendable precedent in bringing a whole box of Pandoras to commemorate the event! A very commendable precedent!

(Continued on page 39)

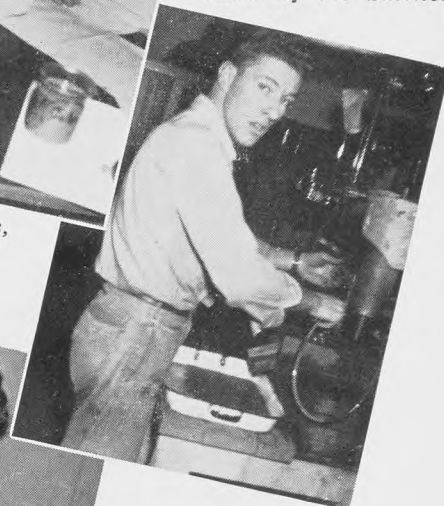
Page Thirty-one



Ken Bradley and his charming bride, Joy, daughter of Don Hogo-boam of the Smelter.



Fred Brien — reports, reports, reports!



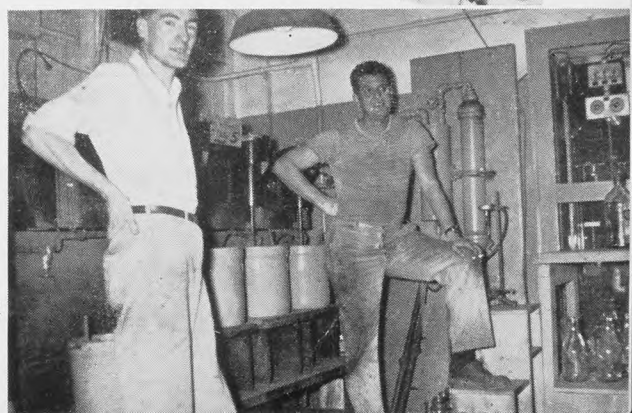
Keith Callender — pardon?



Dusen Raychevich — slipstick soliloquy!



Roy Coulter and bottles.



Don Semple and Chas. Munro.



Mr. and Mrs. Ian Patterson.



Back row: Moira Tindall, Joan Aston, Dolores Loewen, Margaret Fraser. Front row: Melba Bray, Betty Evans, Bernice Forster.



Mr. and Mrs. Bill Tindall.

WINNIPEG OFFICE

A. GILLIES

THE Winnipeg Office breathed a sigh of relief when wedding bells tolled a knell to the single blessed states of Moira MacKenzie and Bill Tindall. I won't say that misery likes a crowd, but Bill was the last bachelor in the office, and the boys are glad to welcome him to the married ranks. The wedding was held September 9th at St. Paul's United Church, and the reception followed at the Business and Professional Women's Club. The newlyweds left by car for Minneapolis and Madison, Wisconsin, for their honeymoon. On their return they moved into a very attractive suite in the Florida Apartments.

Incidentally, the search made by Bill to locate a cozy nest for his bride would qualify him for the position of Inspector in Scotland Yard. He investigated every vacant suite, every suite to be vacated, and every rumour of a vacancy for about three months previous to the wedding. We were all a little afraid for his sanity until about a week before the event he finally arrived at work with a signed lease.

The girls in the office had a party for Moira at Winnipeg Beach on the Labor Day weekend. Betty Evans of the Accounting Department was the hostess, and judging by the very few reports we have heard and by the whispered giggles of the girls we suspect they must have had a lot of fun.

Mr. Bringhurst, after a very nice speech, presented Moira and Bill with a Mixmaster

from the staff, and also with some crystal from the girls. And so we write 30 to the separate lives of two very fine people. Best of luck, kids, and a very happy life together.

Mr. Ayre had a fine motor trip through the States this year on his holidays. Shirley Clint went to Toronto and seemed to enjoy her sojourn there. After a lot of trouble, Ozzie Buchanan finally established a beachhead in his new Norwood home and reports that he is now in to stay. Ed Rummery is the owner of a new Pontiac and Reg. Blake recently bought himself a new Oldsmobile.

Horace Burgoyne and yours truly spent our holidays hunting. We got good bag limits of ducks and partridges and a few prairie chicken, but they were not too plentiful. Neither of us were able to shoot a goose this year.

Margaret Fraser and Betty Smith went to Winnipeg Beach and also motored to Minneapolis for a visit. Art Young visited Saskatchewan again this year.

Plans are now underway for the Christmas party and it would seem that it might be the best ever. Arrangements are not completed yet but it is likely to take place in one of the big hotels on the Friday preceding Christmas.

The fellows in the office have started the winter round of get-togethers with the first taking place at the home of Reg. Blake. I didn't see Bill Tindall around, so

(Continued on page 34)



A 1951 record. Mike Sheehy holds 6-lb. mallard shot by Steve Sedlack at The Pas. Young Johnny Sedlack and Donny Eagleton got in this picture somehow.



SURFACE AND TRANSPORTATION

ROGER FORD

THE scene of operations on the mine backfill has shifted in recent months. The slag pile which faithfully provided the fill for so many years at last played out, at least for a few years, until it accumulates again. However, this situation was foreseen and other sources located. All efforts were brought to bear on the flux line, that thirteen miles of railroad that twists and turns its way up grades, around rocks, over muskegs with near bottomless sink holes. North and west of the plant into the province of Saskatchewan, we straightened some of these curves, cut down grades in order that it might now carry a great increase in traffic to meet the ever increasing demand of the mine dept. A spur was built into the old sand pit at mile 7 and the first fill of this nature was hauled from this point. As it is necessary to have a constant stream of material going down in the mine to replace that which is taken out, attention was turned to the pit at mile 11½, and the operation is now on an around-the-clock basis. A shortage of power is at present hampering operations somewhat, but a new power rectifier is being installed at mile 7 which will free the portable automatic booster now located at that point, for service elsewhere along the line.

The construction of the road to North Star Mine is now rapidly drawing to a successful conclusion. This is a six-mile

stretch of road which adjoins the No. 10 highway near the Pineroot Creek. Two drag lines and three bulldozers have worked for several months on this project which has entailed considerable drilling and blasting of rock out of the right-of-way. Supplies have been moving over the new road for some time now by means of the new ten ton F.W.D. truck recently acquired, and under the able guidance of Wayne Shomperlen this latest addition to the truck fleet is also destined to haul the bulk of the winter freight to Island Falls a few weeks from now.

We extend congratulations to Ronald McKenna, recently married to Armande Cormier of La Salle, Manitoba. The wedding took place on October 15 in St. Annes Roman Catholic Church in Flin Flon. The attendants were Mr. and Mrs. Frank Mooney. The bride was given in marriage by Mike Sheehy. The happy couple spent a short honeymoon in Winnipeg.

A motorist stopped at a small town garage. He approached the mechanic and said, "Whenever I hit seventy, there's a knocking in the engine." The mechanic made a thorough and lengthy study of the engine, wiped the grease from his hands and drawled: "I don't see a thing wrong with your engine, Mister. It must be the good Lord's just a-warning you."



Bud Rogan married Lorna Franks August 31st.



Mrs. Harry Rowe and son Doug.



Mr. and Mrs. Jack Larsson.

ZINC PLANT

MARIE MAHAN

TWO hours of pencil chewing produced a few lines of Season's Greetings, but not much else. Still we were satisfied until a critic remarked that it was too flowery — so we scrapped it and will simply say *Merry Christmas to all*.

The Christmas party we have planned for the children should be very gay, even better than last year. Many thanks to all who have helped with preparations.

Summer vacations and activities seem rather far in the past, but George Emerson's trip to England sounded interesting. Ole Christianson journeyed to the States, and reported a wonderful time. Lillian Smith of the office staff drove to Los Angeles, all worth mentioning, we think. Len Palmer captured first prize in the fishing contest, Walter Lavis second, and George Danko third. The large membership in this club made generous prizes. How about more of you boys getting those big ones weighed next year?

Gunnar Lindgren had the misfortune to break his leg some weeks ago, necessitating a very long stay in the hospital. Remembrance Day had an added significance for us this year, coming scarcely a month after we had received the sad news that

Harry Bryden had died of wounds in Korea. And we have not forgotten Bob Craig, another of our fine boys who lost his life in that tragic train wreck last November at Canoe River, B.C.

Congratulations to our newly married men, namely, Emery Rowlet, Bud Rogan, Marc Trudeau, Andy Biletski, and Jack Larsson.

WINNIPEG OFFICE

(Continued from page 32)

concluded that Moira has laid down the law already!

It looks as if there will be a good curling league this year. There is a lot of interest displayed already, as it will be another battle between four rinks made up of H. B. M. & S. and Millar MacDonald staff.

We have a nice newcomer in the person of Fairlie Allen to welcome to the staff of H. B. M. & S. Glad to have you with us and hope that you like it here as much as we do. Fairlie is about five feet three inches with brown eyes and dark hair and we'll try to get a picture of her for the next issue.

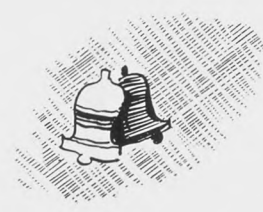
I would like to take this opportunity to wish everyone *A Very Merry Christmas and a Happy New Year*.



Future of Trade in the Pacific

By ENID DELGATTY, Hapnot Collegiate

(We were so impressed with Miss Delgatty's prize-winning essay that we thought it would be of interest to our readers. So here it is).



POLYNESIA, Motokai, Hawaii—fascinating names which breathe of romance and adventure! Spices, sandalwood, seem to send their exotic, tangy fragrances across the blue Pacific Ocean to tickle the nostrils of the new world.

Its past is vivid and exciting, vitally interesting. The rise and fall of Chinese dynasties; the dual discovery of its islands, first by natives, then by the white man; fanciful legends of Japan so woven in with history it is difficult to discern fact from fancy. All lend an aura of fascination to its history.

The past is great, but it is done with. Its chief value is as a key to unlock the door of the future. Past, present, and future are all joined up in one great chain, each one forming a link on which the others depend. To tell the strength or weakness of the future link we must scrutinize in detail that of the present and past. Then conclusions may be drawn.

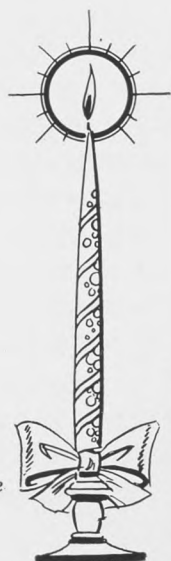
Three main factors greatly affect trade. The first is what powers have possession of, or access to, what territories and in what location. This depends largely on the history of the country and on its politics. Its people will to some extent affect this factor. The second great factor is what the country has to export and what it wishes to import. The third factor which determines the extent and effectiveness of trade is transportation facilities. Products must have easy access to railroads, highways or airlines. In a detailed view of Pacific lands we can see how these factors are affecting her trade and how they will do so in the future.

China's history has brought her to her present day political situation. Until 1911 China was ruled by iron fist of the dynasties, powerful family groups who controlled the entire nation. The last of these, the

Manchu dynasty, was overthrown by Sun Yat-Sen in 1911 and a Chinese republic established in 1912. In 1924 the Kuomintang, or nationalist government was re-organized with Soviet advisers. In 1931 the Communists obtained a hold in China when they established a government in Kiangse. China was split now between the Nationalists and Communists. However, in 1937 with the Japanese invasion China realized she must unite or bow before the Japanese war-lords. She united in her peril and presented an undivided front until the end of World War II. Her political parties again split in dissension and once more divided her internally. In China today exists the strengthening Communist regime, the weakening Kuomintang. Due to inefficient organization and corrupt administration, Chiang Kai-Chek's Kuomintang steadily lost favour with the Chinese people. The aid received from United States (Secretary Marshall proposed in 1947 that three billion dollars be sent) came too little and too late to stop the march of Communism.

The two greatest powers operating at present in the Orient are the United States and Russia. Both realize that the vacuum left by the collapse of Japan must be filled

Prize winners board plane for Pacific crossing.





Enid (right) goes native in Honolulu.

by a strong Chinese government, and each is determined that the new government shall be at least as friendly to itself as to its rival. Who will control? Communist or Nationalist? This question remains at present unanswered. It may be positively assumed that whoever does hold the reins of China will receive the bulk of that nation's trade.

And what does China offer? In trade, her possibilities are unlimited. She has an estimated 240,847,000 tons of coal and other reserves still unexplored. Until recently it was believed she was poor in iron ore, but the Japanese declared during World War II they had discovered deposits totaling a billion and a half tons near the Korean border. If substantiated, this discovery will double her iron resources. China has the world's largest tungsten and antimony deposits in the world. Her supplies of magnesite are thought to be the greatest on earth. Her oil fields in north-west China are reported to have many years' supplies of petroleum. These mineral supplies will be very necessary to North American industry, for that continent is rapidly exhausting her own. China has unlimited sources of hydro-electric power, stemming from the mighty rivers which originate in the mountains of Tibet.

With her mineral resources and her water power China is capable of becoming

a great industrial nation. At present, however, due to lack of development she must import goods from the West such as motor vehicles, industrial and heavy equipment and gasoline. Trade in the future, when China stabilizes politically, will shift and she will be exporting instead of importing many of these products.

China now exports tea, minerals, silk, wood oil, bristles and embroidered goods. She will in future step up production of these products and add industrial goods, for which she has the prime requisites in her resources.

The trend in Chinese trade is to deal more and more with the United States. In 1926, 16.4% of Chinese imports were from the United States; in 1946 the percentage had increased to 57.2. In 1926, 17.4% of her exports were to the United States; in 1946 this figure had risen to 38.7%. Thus, trade with the West from China is increasing. In all probability it will continue to do so in the future.

China has limitless man-power to use. Her dense population of 465,000,000 people, properly led, could help develop China. China has opportunity! China, in the future will be, if she can solve her internal problems, a leading nation of the South Pacific trade.

Closely linked with China is the "Land of the Rising Sun"—Japan! Composed of four main islands, Honshu, Hokkaido, Shikoku and Kyushu, Japan is smaller than the state of California. She wielded a mighty hand in the recent history of the world however, despite her minuteness.

In the years following 1876 Japan conducted an extensive industrialization campaign, and succeeded in making herself powerful enough to attempt to conquer her neighbour, China, in World War II. At the finish of the war, however, she lost most of her territories gained and was put under the jurisdiction of the Supreme Commander of the Allied Powers (MacArthur). Today the United Nations is seeking to re-educate Japan in such a way that she will be able to govern herself in



democracy and the ways of peace. At present Japan has very little self-government and it appears her road back to complete status as an independent nation will be an arduous and long one. She must discard many of her beliefs and ideals such as the "Divine Race" theory and constructively erect new ideals for her peoples.

Japan's pre-war manufactured products were world famous. She did an extensive trade in silk, china, and tea. In 1930 textiles constituted about 50% of Japan's export trade, but in 1937 only 35%. Thus her once-important trade in textiles has somewhat died off.

Her future will depend upon agricultural production, cheap labour and industrial skill and enterprise. Each one of these factors has a hindrance however. Japan's small land area (14,707 square miles) must support some eighty million people. She will be fortunate if she can keep her own people nourished, let alone produce for export. Japan's people, in keeping with the rest of twentieth century people, will demand more wages and better conditions, raising the cost of labour. Her chances in the industrial field are slight, for her mineral resources are low.

Though not forming an actual part of the South Pacific, Malaya, Sumatra, Burma and Java must be considered for their important effect on trade in the Pacific. The produce of these islands provide the grist for the world's industries. From Malaya comes more than 60% of the world's tin supply. Java produces 91% of the world quinine supply. Burma produces an excess of rice, making her a treasure to the hungry millions of the surrounding countries. Borneo, in the same area, has oil and teak. Thus this area of Southeast Asia holds a key for trade to the Pacific. If under a friendly power, trade can be carried on peacefully; if under a hostile nation, trade from east to west could be cut off. It is easy to discern also that these islands, in their proximity to China could come under the same influences as China. Thus if China were communist-ruled, this area would soon be also.



Hula dance for the gals at Waikiki.

A second importance of these islands is their capacity as a stepping stone to New Zealand and Australia. They link the Orient with the white populated areas of New Zealand and Australia. Controlled by a hostile power, trade between them would cease.

The South Pacific Islands—from East to West — are the Marquesas, the Society Islands (Tahiti), Samoan Islands, Phoenix Islands, Tonga Islands and Fiji group. Some are of volcanic origin and others the result of coral growth over slightly submerged land.

These islands have a great strategic military value. They provide numerous stop-overs across the Pacific from North America to the Orient in peace-time. During World War II each mile of these islands was coveted ground, for each island possessed was one step closer to the Orient or to the Occident, as the case might be.

The chief products of these islands are agricultural in nature. Sugar (accounting for a large part of the national income), copra (dried coconut), bananas and pineapples are trading attractions. Shipping, however, is poor and greatly restricts export trade.

As more and more oceanic travel develops these islands will grow in value and worth as plane bases and shipping centres. With more transportation the agricultural products of these islands can be exported. The future for these South Pacific Islands holds great promise. On them rests the chief transportation link-ups, and future trade. The Hawaiian Islands, "the world's melting pot" are important in very much the same sense as the South Pacific Islands; their future is somewhat the same. Originally settled by Polynesian folk known as Menchunes, Hawaii had no contact with the white man until 1778 with the coming of Captain Cook.

Australia is the smallest of the continents, and geologically, one of the oldest. Unlike China, Japan and the Pacific Islands, she is peopled not by yellow or brown races but by white stock. She is a Federation and was once a British colony.

Australia was first settled by convicts sent from England but this practice was abolished between 1840 and 1868. She has barred the entrance of coloured races into her country for many years, thus the only coloured people are the native Australian aborigines.

Australia is a wealthy nation. Her sheep make wool, her number one industry; she produces 40% of the world's wool. Raising beef cattle and dairy farming are also very important. Producing two hundred million bushels of wheat annually Australia is able to export two-thirds of her crop. Manufactured products include textiles, clothing, steel, automobiles, machinery and engines. Her chief mineral products are gold, coal, copper, tin and zinc.

What does the future hold for this blessed nation? Her government is stable, her resources and industries fairly rich. Moderating her immigration policies somewhat, she will have more people to increase her production. Australia, from all indications will grow and prosper and take her place as a leading nation in the Pacific.

A near neighbour to Australia is the Dominion of New Zealand. Discovered in

1642 by the Dutchman, Abel Tasman, these islands support a prosperous, healthy nation.

New Zealand's history is the key to her present-day stability. Before the coming of the white man the islands' population stemmed from a Polynesian race coming from Tahiti in canoes. The Maori descendants, 45,000 in number today, form the native population. Widespread tribal war hindered missionary progress up to 1839, when they were finally halted. In 1871 the Maori resistance was overcome. From that time on the white man was the most important inhabitant of New Zealand. The natives were granted representation in parliament and reasonable peace maintained between the white and brown races. Industry has been well developed in New Zealand. Primarily an agricultural country, her wool growing (on her Southern Island), vegetable, fruit and dairy products and conversion of sub-tropical rain forests to the world's best grazing land have thrived and developed. Although agriculture is her greatest industry, manufacture, totalling \$436,332,850, assures her industrial future. She has the resources and the products. Her extensive road and airline facilities will enable her to transport her products easily and cheaply.

Thus we see New Zealand: stable in government, rich in products and with excellent transportation facilities. Although not equalling Australia's importance, she will play a good part in future Pacific trade.

An overall study of the Pacific shows China, with tremendous possibilities only lacking unity; Japan, not capable in the near future of any great trade or expansion; Indonesian strategic "grist of industry" products; the extreme localitory importance of the South Pacific Islands and Hawaii; the importance of Australia and New Zealand because of industrial wealth.

Air travel is an important factor in the growth of the South Pacific. The world has shrunk with the advent of the aeroplane and time and space are shortened.

The Empress Steamships, huge ocean-going liners, have been replaced by the "Empresses" of the air. The cutting, sleek lines of these queen ships were exchanged for free swift aeroplane wings.

Perhaps huge jet airliners will carry their cargoes from Vancouver to Fiji in an hour in the future. Certainly aeroplanes travelling great circle routes across the Pacific will increase facility of transportation.

A golden future lies before the Pacific. She is the fate which will decide the future of the rest of the world.

Hats off to the Pacific!

ISLAND FALLS

(Continued from page 19)

When Irene Maurer-Hylas returned from her vacation last fall she really had something to talk about. She had had a good close-up look at Princess Elizabeth and Prince Phillip when the royal tour passed through Winnipeg.

We had Fred Baader, a Montreal deep-sea diver, with us for a month last summer. He did some work on our main dam sluice gates and cleaned all the trash racks in front of the generator water intakes.

Merry Christmas and Happy New Year to all.

RESEARCH

(Continued from page 31)

Roy Coulter has just returned from his winter holiday in Chicago and New York. We trust he saw a Broadway musical.

Around about the rest of the department, first of all we'd like to express our sincere congratulations to Mr. and Mrs. Ken Bradley whose wedding took place in town last September.

Another Smelter man, Al Herriot, has bought himself a new home in Lakeside, over near where Sid Yeo built his last year. "Bernie" Gordon and Bruce Stewart have also escaped the landlord's clutches — a sort of frying pan into the fire procedure — and have built in East Birchview.

Well now, *A Merry Christmas to you all*, from the Research staff. Next year, 1952, we'll bring you a report and pictures of Jack Kirkbride's special lab. with its new induction furnace — the gadget that melts zinc without getting hot — and polerograph — Flin Flon's T. V. set.

YOUR SUGGESTION SYSTEM

(Continued from page 17)

Part of the Suggestion Secretary's job is to listen to these complaints and it has happened that this has led to a new understanding of the suggestion in question and your Suggestion Committee have in more than one case reversed their decision and recommended a cash award in place of a rejection.

We ask you to keep in mind these three points:

First, you can not win if you don't try. Get those ideas of yours into the suggestion box.

Second, explain your idea as clearly as possible. This is not always easy to do, so do not hesitate to call on any of the committee members or the Suggestion Secretary for help, information or advice.

Third, do not let a rejection discourage you. Every suggestion that you submit is further proof that you are on the job, wide awake and trying.

PICTURE CREDITS

Outside cover, by permission of Hudson's Bay Company, shows early traders fashioning lumber for toboggans. Inside covers by Ted Tadda, of Cranberry Portage.

POEMS, PUNS AND PHILOSOPHY

"IF I WERE A BOSS . . ."

If I were a boss I would like to say,
"You did a good job here yesterday."
I'd look for a man, or a girl, or boy
Whose heart would leap with a thrill of
joy

At a word of praise, and I'd pass it out
Where the crowd could hear as I walked
about.

If I were the boss I would like to find
The fellow whose work is the proper kind;
And whenever to me a good thing came,
I'd ask to be told the toiler's name,
And I'd go to him and I'd pat his back
"And I'd say: That was perfectly splendid,
Jack!"

Now a bit of praise isn't much to give,
But it's dear to the hearts of all who live;
And there's never a man on this good old
earth
But is glad to be told that he's been of
worth;

And a kindly word when the work is fair
Is welcomed and wanted everywhere.

If I were a boss, I am sure I should
Say a kindly word whenever I could,
For the man who has given his best by day
Wants a little more than his weekly pay;
He likes to know, with the setting sun
That his boss is pleased with the work he's
done.

—Contributed.

My best of wishes for your merry Christ-
masses and your happy New Years, your
long lives and your true prosperities.
Worth twenty pound good if they are de-
livered as I send them. Remember! Here's
a final prescription added, "To be taken
for life."

—Dickens.

The soldier was reading a letter from
his wife, and didn't seem too pleased about
it. "What's the matter?" asked his chum,
"is there trouble at home?"

"Well, not exactly," replied the soldier,
"but we've got a freak in the family. It
says here, "You won't know Willie when
you come back; he's grown another foot."

The worst thing about history is that
every time it repeats itself the price goes
up.

What though upon his hoary head
Have fallen many a winter's snow?
His wreath is still as green and red
As 'twas a thousand years ago.
For what has he to do with care!
His wassail-bowl and old arm-chair
Are ever standing ready there,
For Christmas comes but once a year.
Christmas comes but once a year.

—Thomas Miller.

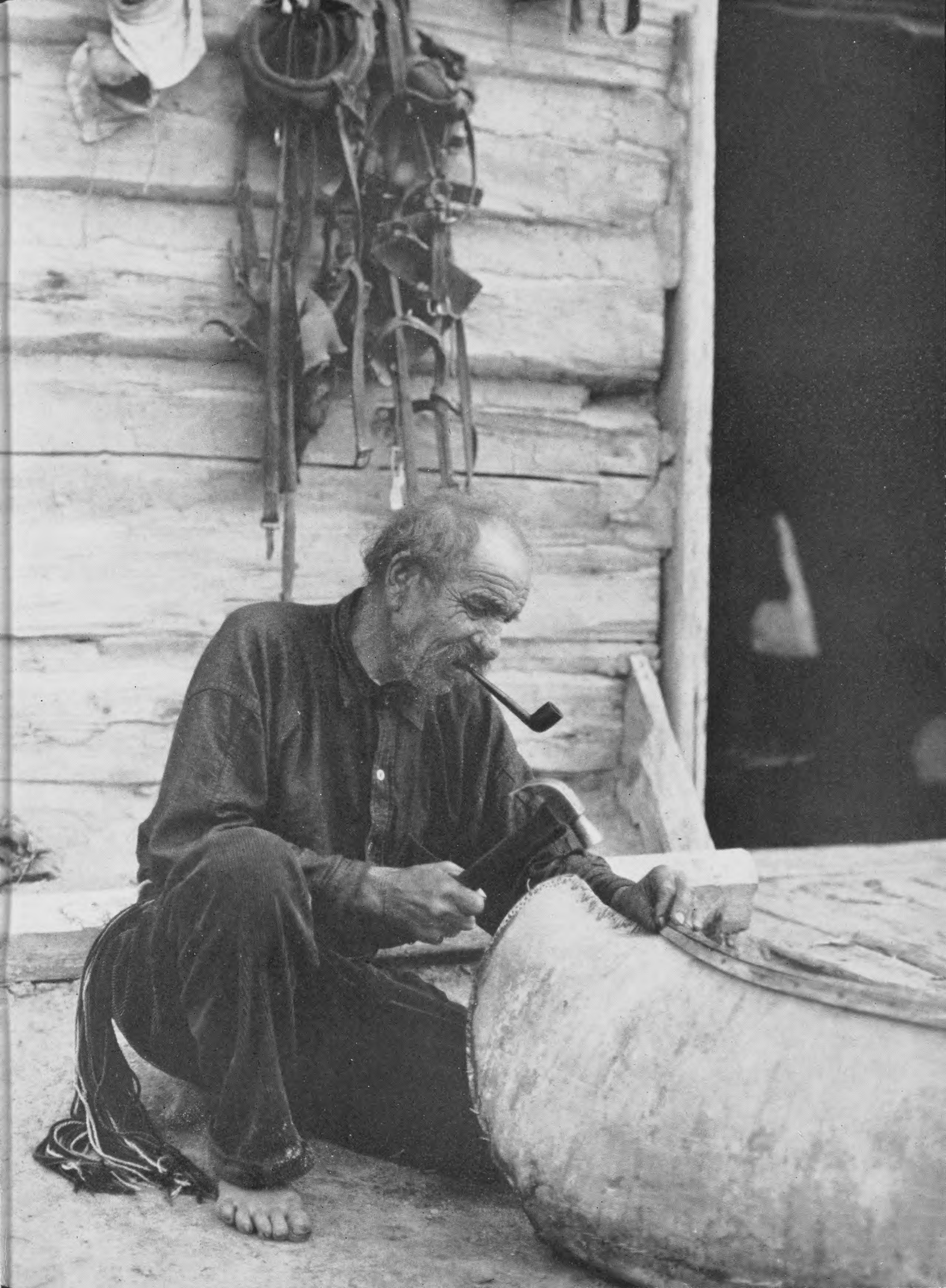
Every time I pass my church
I like to stop and visit,
So when at last they wheel me in
The Lord won't ask, "Who is it?"


Life comes before literature, as the ma-
terial always comes before the work. The
hills are full of marble before the world
blooms with statues.

—Contributed.

FRIENDSHIP

To be a friend and pretend to be
Are quite two different things.
Because the pretender's friendship is
The good for him it brings.
'Tis a pity there's no way
For weeding people out
And separating the really dear friends
From the well-known "Me Too" lout.





Season's Greetings

Nineteen hundred and fifty-one is nearing its close, and once again I should like to express to all the employees of Hudson Bay Mining and Smelting Co., Limited and its subsidiary companies, my keen appreciation of their continuing co-operation and friendly good will, and extend to each one of you and your families my sincere good wishes for a Merry Christmas and a Happy and Prosperous New Year.

A. L. Green